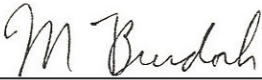


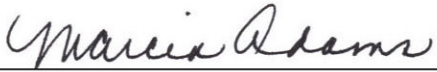
**BIOLOGICAL RESOURCES REPORT
EURUS ENERGY BORREGO SOLAR FARM
APN 141- 230-26 (MUP 09-012)
APN 141-230-33 (MUP 09-014)
Log No. ER 09-05-001**

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**December 2009
Revised May 2010
Revised June 2010
Revised September 2010**

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GLOSSARY OF TERMS AND ACRONYMS

ACOE	Army Corps of Engineers
APN	Assessor's Parcel Number
BMO	Biological Mitigation Ordinance
CDFG	California Department of Fish and Game
CDFTL	Colorado Desert Fringe-Toed Lizard
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
ESA	Endangered Species Act
FTHL	Flat-Tailed Horned Lizard
MSCP	Multiple Species Conservation Program
NCCP	Natural Communities Conservation Planning Process
NDDB	Natural Diversity Data Base
PV	Photovoltaic
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
USFWS	U.S. Fish and Wildlife Service

SUMMARY

1. Introduction, Project Description, and Location

This biological resource report has been prepared to identify the biological resources present on two parcels totaling approximately 340.84 acres, on a portion of land owned by SDG&E at the Borrego Valley Substation, and on two potential transmission line corridors in the unincorporated community of Borrego Springs in San Diego County, and to determine the potential impacts of proposed development. Included are recommended measures to avoid, minimize, and/or mitigate significant impacts in compliance with federal, state, and local regulations including the California Environmental Quality Act (CEQA), the County of San Diego's Resource Protection Ordinance (RPO), and the County's Guidelines for Determining Significance for Biological Resources.

The Project would result in the construction, operation and maintenance of a photovoltaic (PV) solar farm within the community of Borrego Springs, California in northeastern San Diego County. Eurus Energy America Corporation's wholly owned subsidiary or its affiliates, EE Borrego Land LLC (herein referred to as Eurus Energy) proposes to develop such facilities to allow for the long-term generation of clean energy from solar power that would ultimately be sold and distributed for public consumption.

The Project would consist of two separate solar generation facilities on two individual parcels of land, with additional lands affected to allow for the transport of power generated to the existing Borrego Substation. The County Assessor Parcel Numbers (APNs) affected by the Project for the main facilities include 141-230-26 (approximately 288 acres) and a portion of 141-230-33 (approximately 53 acres - to be leased by the Project proponent). Access to the 288-acre parcel and 53-acre lease parcel would be provided from Palm Canyon Drive via an existing 12- to 16-foot wide decomposed granite (d.g.) road.

The facilities would consist of an array of fixed-tilt, non-tracking solar PV panels, inverter/switching gear housed in 38 12-foot by 26.5-foot structures, one 20-foot by 30-foot storage shed, two onsite substations, and supporting transmission facilities. Energy generated will be transferred to the existing Borrego Substation, located approximately one mile to the west of the 288-acre parcel, adjacent to Borrego Valley Road, via a series of overhead transmission lines. The transmission lines will extend from the 288-acre parcel to the Borrego Substation along one of two identified routes:

1. Northern Transmission Corridor - west from the northwesterly corner of the parcel within an existing 20-foot easement maintained by San Diego Gas and Electric (SDG&E) (overhead facilities). This would include a 200-foot arc of land in the northeast corner of Section 34; or,

2. Southern Transmission Corridor - south from the southwesterly corner of the parcel along an existing roadway to Palm Canyon Drive (underground), west along Palm Canyon Drive (overhead), then north along Borrego Valley Road (overhead).

Project-related improvements at the existing Borrego Substation will occur in the area immediately to the south of the existing fenced facilities. Project-related improvements at the Borrego Substation will affect an area of up to approximately 1.0 acre, and will include installation of a new 69 kV termination rack (bus bar), associated conductors and insulators, two breakers, two disconnect switches, and associated protection and control equipment. A “breakaway” perimeter fence 8 feet in height topped with one foot of barbed wire (similar to existing fencing around the Borrego Substation facilities) will be installed for security purposes. It is anticipated that construction will begin in the fall of 2010 and completed by June 2011. All staging for Project construction would be done on-site.

A photovoltaic system, as proposed here, generates electricity directly from incident sunlight, as contrasted to solar thermal systems, which use incident sunlight to heat water to produce steam to drive generation of electricity. Photovoltaic systems do not require large amounts of water. Water will be used to wash the panels; this will be done up to 2 times per year. The Project would use approximately 2.5 acre-feet of domestic water. This is equivalent to a rainfall event of less than one-tenth inch over the 300+ acres, and would be done over a three to four week period. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project’s contribution to cumulative impacts to groundwater resources.

The subject properties are located in the community of Borrego Springs in San Diego County. They are located in Township 10 South, Range 6 East, in Sections 34 and 35 of the USGS Clark Lake Quadrangle, north and west of the Borrego Valley Airport, north of Palm Canyon Drive.

2. Survey Methods

The County’s Scoping Letters (September 18, 2009 and January 23, 2009) called for protocol or focused surveys on two animal species and two plant species. A protocol survey methodology has been developed only for one of these, the flat-tailed horned lizard (FTHL, *Phrynosoma mcallii*). This protocol was developed by federal agencies for their projects on federal land. Protocol surveys were conducted in early July 2009 to determine presence/absence of the FTHL, again proposed for federal listing. The lead biologist on the lizard surveys was Kevin Clark (Scientific Collecting Permit SC-008832). Additional plant, wildlife, and habitat observations were made on these protocol lizard surveys, and that information has been incorporated into this report.

Surveys for habitat mapping, plants, and animals were conducted in 2009 and 2010. Surveys were scheduled in the spring to observe plant species which would not be obvious during other

times of the year. Overall, a total of 90+ person-hours were spent in the field in 2009 and 109.5 person-hours in 2010.

3. Existing Conditions

Four soils were mapped within the survey area by the U.S. Soil Conservation Service (Bowman, 1973). Most of the area is underlain by Indio silt loam (InA) and Indio silt loam, saline (IoA), both with 0-2% slopes. Rositas fine sand, 0-2% slopes (RoA), and Rositas fine sand, hummocky, 5-9% slopes (Rrc) are also present. Overall drainage of the site is largely by sheet flow, from northwest to southeast, terminating in the Borrego Sink approximately four miles away. Anza-Borrego State Park surrounds the Borrego Valley. The Anza-Borrego State Park is the single most-dominant land use in the region, encompassing in excess of 600,000 acres. The airport is south of the project area, and west of the airport and Project site is the Road Runner Club, an RV Park. To the southwest is a golf course development. Further west is the “downtown” area of Borrego Springs. There are open areas to the north, and then agricultural fields. The Borrego Badlands, mostly within the state park, are approximately five miles to the east. Immediately west of Parcel A is a large, irrigated agricultural operation. South of this agricultural area is the De Anza Ready Mix facility. A school is located approximately one mile to the west, at the intersection of Palm Canyon Road and Borrego Valley Road.

Three habitat types/vegetative associations were mapped on the parcels and the transmission corridors:

- Desert Saltbush Scrub (Holland/County Code 36110)
- Stabilized and Partially-Stabilized Desert Dunes (Holland Code 22200)
- Disturbed Habitat (Holland/County Code 11300)

Parcel A. The majority of this parcel (285.36 acres) supports primarily a monotypic habitat dominated by saltbush (*Atriplex polycarpa*), with sparse groundcover consisting of mallow (*Malva neglecta*), Mediterranean grass (*Schismus barbatus*), and mustard (*Brassica tournefortii*). Thus it has all been mapped as Desert Saltbush Scrub. A number of native wildflower species were found in 2009, including desert pincushion (*Chaenactis stevioides*), wooly daisy (*Eriophyllum multicaule*), desert sunflower (*Geraea canescens*), desert dandelion (*Malacothrix glabrata*), sand verbena (*Abronia villosa*), and desert lily (*Hesperocallis undulata*). In 2010 the parcel was heavily invaded by malva and mustard, but a fair number of wildflowers noted in 2009 were found. Additionally, new wildflowers noted included yellow comet (*Mentzelia affinis*), spectacle pod (*Dithryea californica*), and several *Cryptantha* spp. Approximately 2.93 acres of stabilized and partially-stabilized dunes are found along the southern boundary of this parcel. The topography of this small on-site area is characterized by several dune ridges, which continue off-site to the south. While this code is not recognized in Oberbauer’s revised Holland/County codes, this is the Holland habitat type which most closely approximates the on-site condition. A total of 25 vascular plants were observed on Parcel A; 80% of those were

native species. The non-native malva, mustard, and Mediterranean grass were pervasive throughout the parcel. One sensitive plant species, Gander's cryptantha (*Cryptantha ganderi*), was found on Parcel A.

Twelve species of birds, four mammal, three reptiles, and five butterfly species were observed on this parcel. One sensitive bird, the loggerhead shrike, was found on-site; this is discussed further below under the discussion of sensitive species. Coyote (*Canis latrans*) scat was noted and coyotes were also observed; a coyote den was also found during the 2010 survey. Black-tailed jackrabbits (*Lepus californicus*) were observed in several locations. Both the desert kangaroo rat (*Dipodomys deserti*) and Merriam's kangaroo rat (*D. merriami*) were also detected. Reptiles found included side-blotched lizard (*Uta stansburiana*), western whiptail (*Apidocelis tigris*), and Colorado desert sidewinder (*Crotalus cerastes laterorepens*). During a field visit on August 21, 2009, County biologist Monica Bilodeau observed one individual Colorado Desert fringe-toed lizard (*Uma notata notata*) along the boundary of Parcels A and B.

Parcel B. The habitat on parcel B (52.55 acres) is largely the same as on Parcel A (Desert Saltbush Scrub), but not as weedy, and it supports more wildflowers than Parcel A. Additionally, *suaeda* (*Suaeda nigra*) greasewood (~~*Sarcobatus vermiculatus*~~) is intermixed with the saltbush. Thirty plant species were found on Parcel B; of those, 9 (30%) were non-native. Overall, this parcel had more wildflower species in greater numbers. Ten species of birds were found on this parcel; the shrike was seen here as well. The same mammals were present as on Parcel A, with two coyote dens also found. In addition to the side-blotched lizard, a Colorado desert sidewinder was also noted on this parcel.

Substation Expansion. The substation expansion area (approximately 1.0 acre) is very heavily invaded by mustard species, but also supports a sparse cover of desert saltbush scrub. Very few wildflowers were found in this area due to the prevalence of the mustard. No wildlife species were observed on the area. Habitat quality here is generally poor due to the dominance of non-native vegetation, but common rodents and reptiles found elsewhere in the Project area could potentially occur.

Northern Transmission Corridor. The 20-foot wide Northern Transmission Corridor encompasses approximately 2.35 acres of Desert Saltbush Scrub and 0.07 acre of Stabilized and Partially-Stabilized Desert Dunes. The southern boundary of the corridor is the section line, with the agricultural area south of the fence and corridor. The 200-foot wide off-site arc (in the northeastern corner of Section 34) is disturbed land, having been used for agricultural purposes. Habitats and species found on the Northern Transmission corridor line were similar to those found on Parcel A; Gander's cryptantha as well as ribbed cryptantha (*C. costata*) was also found in this area. Similar wildlife species to those noted above were noted along the Northern Corridor.

Southern Transmission Corridor. The 100 foot-wide portion of the Southern Corridor from Parcel B to Palm Canyon Drive encompasses approximately 2.5 acres, and is also dominated by Desert Saltbush Scrub. Also found in this area were a few alkali goldenbush (*Isocoma acradenia*

ssp. *eremophyla*) and one creosote bush (*Larrea tridentata*). One area (approximately 0.5 acre) was mapped as Disturbed, as it was being covered with asphalt as part of on-going airport operations. Overall, the southern portion of this site west of the airport is largely disturbed. Along Borrego Valley Drive and Palm Canyon Road, the existing road right-of-way was graded adjacent to the existing power poles. Little wildlife was noted on the Southern Corridor due to the disturbed nature of much of this area. Nonetheless, one sensitive species, northern harrier (*Circus cyaneus*) was observed flying across the Southern Corridor on one occasion in 2010.

No federal- or state-listed rare or endangered species were observed on any of the parcels, nor within the potential transmission corridors. Directed surveys were done for Peirson's milk vetch (*Astragalus magdalenae peirsonii*), a federal-listed Threatened and state-listed Endangered species and for Gander's cryptantha, a County List A and a California Native Plant Society List 1B species. Three Gander's cryptantha individuals were found together on the Northern Transmission Corridor and one individual was found on Parcel A. Additionally approximately five ribbed cryptantha (*C. costata*) were found on the Northern Corridor, near the northwestern corner of the adjacent agricultural parcel. This is a County List D species.

Two sensitive bird and one sensitive reptile species were observed on Parcels A and B, and potential habitat for another sensitive reptile exists on portions of those parcels as well. One Loggerhead Shrike (*Lanius ludovicianus*, a County Group 1 species) was observed in 2009. It was singing and perching on the few large mesquite (*Prosopis glandulosa*) trees on Parcels A and B. Its behavior suggested it was likely breeding on or adjacent to the property. The open, sparsely vegetated nature of the property with widely spaced high perches provides high quality habitat for this species. A northern harrier (*Circus cyaneus*), also County Group 1 species, observed flying over the Southern Transmission line corridor late in the afternoon in 2010. No suitable nesting habitat is present within the corridor or Project area for this species.

The Colorado desert fringe-toed lizard (CDFTL, *Uma notata notata*) is a California Species of Special Concern and a County Group 1 Sensitive Species. While it was not found on-site during protocol surveys conducted for the FTHL, it was observed moving between Parcels A and B by County staff during a field visit on August 21, 2009.

The Flat-tailed horned Lizard (FTHL) is found in a restricted area of low desert habitat in southeastern California, southwestern Arizona, and adjacent Mexico. This lizard was proposed by the U.S. Fish and Wildlife Service for listing as a threatened species under the Endangered Species Act in 1993. In 2003, this proposal was withdrawn due to ongoing conservation efforts, such as the establishment of a Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). As a result of further court actions, on March 2, 2010 USFWS announced it had reinstated the proposal to list the species as threatened. It is currently considered a California Species of Special Concern and a County Group 1 species.

Horned lizard scat was found in the sandy soils along the northern boundary of Parcel A, in the northwest and northeast corners. Scat could be from the FTHL or from the southern desert horned lizard (*Phrynosoma platyrhinos calidarumi*), a second horned lizard species also reported

from the general area. Several other sensitive species are of local concern in the Borrego Valley. They include Swainson's hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), turkey vulture (*Cathartes aura*), and badger (*Taxidea taxus*). None of these species were found on-site or are expected to occur due to lack of suitable habitat and/or prey species.

No wetlands/ jurisdictional waters were found on Parcel A or Parcel B. On the Southern Transmission Corridor, two small segments of ephemeral drainages were observed. These are small erosion features. They are not jurisdictional per the U.S. Army Corps of Engineers or the County's Resource Protection Ordinance, but may be considered jurisdictional by the California Department of Fish and Game.

The airport is immediately south of the project area. The Anza-Borrego Desert State Park surrounds the Borrego Valley. Habitat connectivity has been broken up to the west by the school, the developed RV park complex, the golf course development, and the commercial area of Borrego Springs. Immediately west of Parcel A is a large, irrigated agricultural operation. South of this agricultural area is the De Anza Ready Mix facility. These developments, with the airport, all are fenced. The airport is bordered by a chain link fence. These existing facilities likely eliminate or greatly reduce the potential for wildlife movement to or from the west and south.

Overall habitat connectivity occurs to the undeveloped lands to the north and east, along the entire north and east boundaries. Observations during surveys found the proximal off-site habitat to be the same, a sparse desert saltbush scrub. Topography is homogeneous, with little relief in the overall area. No linear features (watercourses, ridges, valleys) were observed. The ephemeral Coyote Creek drainage, running north-to-south, is approximately one-half mile to the east, and the Borrego Badlands are approximately five miles to the east.

4. Project Effects

Grading for the Project would impact nearly all of the two parcels, except for areas set aside for preservation of archaeological resources, resulting in the loss of 321.44 acres of desert saltbush scrub. Construction of the two transmission corridors (including the arc on the Northern Corridor) and the substation expansion would impact an additional 5.35 acres of desert saltbush scrub, 0.96 acre of disturbed land, and 0.07 acre of stabilized and partially stabilized desert dunes.

Details of these impacts are as follows, and are summarized in Table S-1: The portion of the Southern Transmission Corridor leading south from the Project to Palm Canyon Drive is expected to be entirely impacted (2.5 acres, including 2.0 acres of desert saltbush scrub and 0.5 acre of disturbed land). No habitat is expected to be affected at the existing poles along

Table S-1. Project Impacts

HABITAT TYPE	EXISTING ACRES	ACRES IMPACTED	OFF-SITE IMPACTS	TOTAL IMPACTS	MITIGATION RATIO ¹	MITIGATION ACREAGE REQUIRED	PRESERVED ON-SITE ²	OFF-SITE MITIGATION REQUIRED
Desert saltbush scrub (36110)	337.91	321.44	5.35	326.79	2:1	653.58	16.47	653.58 ³
Stabilized and partially stabilized desert dunes (22200)	2.93	0.00	0.07	0.07	2:1	0.14	2.93	0.14 ⁴
Disturbed habitat (11300)	0.00	0.00	0.96	0.96	0:1	0.00	0.00	0.00
TOTAL	340.84	321.44	6.38	327.82		653.72	19.40	653.72

¹ Per the County's Guidelines for Determining Significance, Table 5, for habitat types outside the approved MSCP plans.

² This acreage is for protection of archaeological resources on Parcels A and B (16.47 acres) and avoidance of dune habitat. It is too small and isolated to be counted toward biological mitigation.

³ Under conditions of MUP 09-012: 536.88 acres. Under conditions of MUP 09-014: 106.0 acres. Under CEQA document conditions: 10.7 acres.

⁴ Under CEQA document conditions: 0.14 acre.

No state- or federal-listed Endangered or Threatened species were observed within the Project area. Thus, the Project would not impact any state- or federal-listed endangered plant or animal species.

The Project would impact habitat supporting one County Group A plant species, Gander's cryptantha. One group of three individual plants was found on the Northern Transmission Corridor, and one individual was found on the northwestern corner of Parcel A. Habitat requirements of Gander's cryptantha are not well known. The nearest reported location is east of the airport, on sand dune habitat. The group of three plants on the Northern Corridor are in an area of sand, with nearby dune topography observed to the north. The solitary individual found on Parcel A was in sand substrate. No plants were found on the silt loam substrate that characterizes most of the Project site. Construction could impact these plants and areas within the likely limits of occurrence (LLO).

The Project would impact habitat supporting one County Group D plant species, ribbed cryptantha. Approximately five individuals were found on the Northern Transmission Corridor. Construction could impact this plant. No other County Group A, B, C or D plant species or Group 2 animal species occur on-site and thus would not be affected.

The Project would impact habitat potentially utilized by County Group I animal species (FTHL, CDFTL, loggerhead shrike). Both lizard species prefer substrates of wind-blown fine sand. The lizards can be found on adjacent habitats, but are more likely in the sand habitats. In this general area, the sandy substrate is Rositas fine sand, and is found only at the northwestern corner and northeastern corner of Parcel. As such, the Project is impacting preferred habitat only at its edges. Construction could impact individuals of either lizard species that are present on the Project site.

A single loggerhead shrike was observed, and may have been nesting. The Project would eliminate some habitat currently used for foraging, possibly nesting, and perching sites. Given the passive nature of the Project, some foraging would be expected to continue, but the degree cannot be quantified. No nesting habitat for the northern harrier is present on-site or within the proposed transmission corridors or expansion area.

The project would not impact the arroyo toad, as it does not occur here. The Project would not result in the loss of golden eagle habitat. The Project would result in the loss of some raptor foraging habitat. Raptor foraging is generally heavier on the agricultural areas of the Borrego Valley, which support a greater density of rodents, but some amount of foraging would be expected on the Project area. Some raptor foraging would be expected to continue over the Project area when built, because prey would be expected to live in and around the Project components, but the degree of foraging cannot be predicted.

The cumulative impacts study area defined for this project is the area of Borrego Springs. This covers approximately 27,000 acres, including currently developed commercial, industrial, residential, airport facilities, and agricultural lands. A list of cumulative projects was developed in consultation with County staff. The impacts of these projects are summarized in Table 3 in Chapter 4 of this report. Because presence assumptions made for some sensitive species are based on habitat for this report, because of the lack of information on some species, and because of the utilization (or potential utilization) of the Project site by some species, consideration of habitats is necessary to best define potential cumulative impacts to sensitive species. The total amount of habitats that would be impacted by the cumulative projects (without consideration of mitigation) is approximately 1109 acres.

Two native habitat types are present on the Project site – Desert saltbush scrub and Stabilized and partially stabilized desert dunes. Loss of 326.79 acres of Desert saltbush scrub (including off-site impacts) represents approximately 60 percent of the cumulative projects total of this habitat. As such the Project would make a cumulatively considerable contribution to impacts to this habitat. All of the Stabilized and partially stabilized desert dunes habitat included in the cumulative projects' impacts is on this Project site. This is the Holland habitat type which most closely approximates the on-site condition, but this code is not recognized in Oberbauer's revised Holland/County codes, and may not have been considered in the habitat mapping of the other properties. Since the amount of this habitat to be potentially impacted by construction of the Northern Transmission Corridor is small – 0.07 acre -- and since an isolated transmission corridor such as this would be expected to revegetate, the Project would not make a cumulatively considerable contribution to impacts to this habitat.

The Project site comprises approximately 30 percent of the native habitats impacted by the cumulative projects, and would thereby potentially have a cumulatively considerable contribution to impacts on Gander's cryptantha. Ribbed cryptantha, a list D species, would be affected similarly. Also due to the impacts to habitats, the project would also result in cumulatively considerable contributions to the FTHL, CDFTL, loggerhead shrike, and Swainson's hawk. Impacts to the northern harrier are not considered cumulatively considerable as the site would not be expected to provide significant hunting or nesting opportunities.

There are two ephemeral stream segments, erosional features, and these segments would be under the jurisdiction of the California Department of Fish and Game. The jurisdictional area of these segments totals approximately 0.01 acre. The Project proposes to place fill (alter) these segments, and would therefore be required to complete and submit to CDFG a Notification of Lake or Streambed Alteration Packet. Upon review of that Packet, CDFG would determine if a Streambed Alteration Agreement would be required. Fill of these segments would contribute to cumulative impacts in the area. Mitigation for impacts to these segments would be determined with the Department during its review of the required Notification of Lake or Streambed Alteration Packet

The Project is adjacent to agricultural uses to the west, and the Borrego Valley airport is to the south. No adverse indirect impacts are expected to occur to these areas. Habitat off-site to the north and east of Parcel A could be subject to “edge effects” associated with site development (e.g., drainage, lighting, noise, etc.). A photovoltaic system, as proposed here, generates electricity directly from incident sunlight, as contrasted to solar thermal systems, which use incident sunlight to heat water to produce steam to drive generation of electricity. The Project would use approximately 2.5 acre-feet of domestic water. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project’s contribution to cumulative impacts to groundwater resources. Should a weed problem develop around the panels, the Project would instigate a weed control program, either mechanical or spray-based or a combination, following consultation with the County of San Diego.

The Project could increase nighttime lighting. No impacts to core wildlife corridors would occur, as the area is already developed to the west and south of the Project, so movement in wildlife corridors would largely occur in the undeveloped lands to the north of the Project area. The project would not result in large numbers of persons or any domestic animals occupying the Project site; hence, the Project will not increase human access or predation or competition from domestic animals, pests, or exotic species to levels that would adversely affect sensitive species. If done during the nesting season, grading, clearing, fuel modification and/or noise-generating activities could impact nesting success for the loggerhead shrike.

The Project is not expected to interfere substantially with the movement of any native resident migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Project would not result in significant impacts related to wildlife movement or nursery sites nor would it contribute to cumulative impacts related to wildlife movement or nursery sites.

The Project is not expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5. Mitigation Measures and Design Considerations

The primary design consideration adopted was a reduction of the original project site. The original site included an approximately 50- acre area of dunes in its southern portion. The dunes areas are composed of the fine sand habitats utilized by both sensitive lizard species, and potentially supporting Gander’s cryptantha. Most of the dune acreage was eliminated from the project site, and the portion of this southern dunes habitat still within the project site has been avoided with the grading now proposed. Measures related to drainage, lighting, noise, invasive species, and barriers have also been incorporated into the Project design to avoid or minimize

indirect impacts to adjacent habitats, particularly those to the north and east where adjacent lands are undeveloped and allow for wildlife movement.

Mitigation for the loss of 326.79 acres of desert saltbush scrub and 0.07 acre of stabilized and partially stabilized dunes would be required at a 2:1 ratio (per the County's *Guidelines for Determining Significance*, Table 5, for habitat types outside the approved MSCP plans).

Species-specific mitigation is required for Gander's cryptantha, a County Group A species. One individual plant was found on the Project site, on Parcel A. Therefore, mitigation land acquired must include at least two individuals of Gander's cryptantha (2:1 ratio). One group of three individuals was found on the Northern Transmission Corridor. If the Northern Transmission Corridor is utilized, mitigation land must include an additional six individuals, for a total of at least eight individuals.

To provide species-specific mitigation for potential direct impacts to CDFTL and FTHL, a barrier fencing and removal program shall be implemented in accordance with the *Flat-Tailed Horned Lizard Rangewide Management Strategy* (Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003; see Appendix 8 to this report). Direct impacts to the FTHL would be lessened to below a level of significance with implementation of the protocol program of fencing and removal of individuals prior to construction. This protocol program would also include the CDFTL, which is active at the same time, and would lessen direct impacts to this lizard species to below a level of significance.

Direct impacts to nesting of the loggerhead shrike would be lessened to below a level of significance with seasonal construction constraints. Should construction be proposed at this time, a survey to determine if nesting shrikes are present would be done. Impacts to foraging habitat for Swainson's hawk and loggerhead shrike would be lessened to below a level of significance with the acquisition of native habitats within or near the study area. Impacts to ribbed cryptantha, a County Group D species, would also be mitigated to below a level of significance with the acquisition of these lands. Mitigation land will be acquired at a 2:1 ratio; mitigation for habitat loss is discussed in Section 4.4 and 4.5 of this report.

Mitigation to support regional long-term survival of all of these sensitive species would be done through the acquisition and preservation of native habitats. Mitigation lands will be selected with the input of the County of San Diego and Anza-Borrego State Park. It has been determined that this input will be given following these agencies' review of this Biological Resources Report. Accordingly, the specific mitigation parcel(s) cannot be evaluated at this time, as they have not yet been selected.

The following species-specific criteria for selection of mitigation lands should be considered:

- Flat-tailed horned lizard. Thirteen state and federal entities have developed a strategy for long-term preservation of the FTHL. One of the tenets of the strategy is the creation and

implementation of five Management Areas in Arizona and California. One of these is in the Borrego Badlands, within five miles of the Project site. Selection of mitigation lands should consider suitable parcels within, adjacent, or near the Borrego Badlands Management Area. If no records of FTHL exist for otherwise desirable potential mitigation land (no records of FTHL exist for the project site and no FTHL were found on the protocol surveys), the protocol evaluation used to determine the project site should be assumed to support FTHL should be implemented. This approach would also support CDFTL long-term regional survival, as it occupies much of the same habitats.

- Loggerhead shrike and Swainson's hawk. Acquisition and preservation of foraging habitat would support long-term regional survival for these two bird species.
- Gander's cryptantha. Acquisition and preservation of habitat would support long-term regional survival for this species. While its requirements are not well-known, both locations on the Project area were in sand substrate, and at least one historical record (Reiser, 1994) noted it in the sand dune area east of the Airport. It apparently is not limited to this substrate, but does utilize it. Acquisition of habitat would also support the long-term regional survival of ribbed cryptantha.

The following general criteria for selection of mitigation lands should be considered:

- Proximity to the Park. Anza-Borrego State Park includes 600,000 acres. Lands that are inholdings or adjacent or near the park would have a higher biological value than similar lands that are distant. Such lands are a part of the overall system of habitats of the park, as opposed to more isolated pieces. Edge effects are eliminated or greatly reduced with inholdings, adjacent lands, or lands in close proximity.
- Sand substrate. While the FTHL and CDFTL are not limited to fine sand substrate, it is the optimal habitat for these species. It is also the substrate for Gander's cryptantha on the Project site, and on the site adjacent to the east end of the Airport.

While the Project could potentially impact sensitive species, the aforementioned mitigation measures would fully offset these adverse effects. Habitat Mitigation Requirements for each project component are summarized in Table S-2.

At the present time, the Project is proposing to fully mitigate its impacts at a 2:1 ratio (653.72 acres) via one of five mitigation alternatives:

1. Fund the transfer of inholdings or lands adjacent the Anza Borrego State Park from Anza Borrego Foundation (ABF) to the state park. Transferred lands must contain specified habitat or like function habitat.

2. Purchase of inholdings or lands adjacent the park directly by Eurus and then transferred directly to the state parks or other government agency charged with conservation of natural resources. Evidence of satisfaction must include a copy of the contract with the agency, and a written statement from the agency that (1) the land contains the specified acreage and the specified habitat, or like functioning habitat, and (2) the land will be managed by the agency for conservation of natural resources in perpetuity.
3. Purchase of inholdings directly by Eurus and then the inholdings would be transferred to County Parks and Recreation Department to temporarily manage the land before transferring the land to state parks. A short term resource management plan (RMP) would be established to the satisfaction of the Director of Planning and Land Use and Parks and Recreation.
4. Find and purchase appropriate habitat land (approved by the lead agency) and establish a Resource management plan (RMP). This would require evidence that the land is dedicated in a conservation open space easement and a Resource Manager is established and an endowment to ensure funding of annual ongoing basic stewardship costs shall be complete prior to the approval of the RMP.
5. Purchase habitat credit from County Parks and Recreation Department. Sufficient habitat does not exist on County mitigation properties therefore this option would be in combination with one of the first four options.

When the final mitigation plan/location is determined by DPLU, County Parks, and the ABF, a separate Mitigation Plan document shall be submitted to the County as a supplement to this Biological Resources Report.

Table S-2. Habitat Mitigation Requirement by Project Component

Project Component	Resource Type Impacted	Amount Impacted	Mitigation Required (2:1 ratio)	Agency Responsible for Mitigation Enforcement
Parcel A (MUP 09-012)	Desert saltbush scrub (36110)	268.44 acres	536.88 acres	County of San Diego
	Gander's cryptantha	One individual	Habitat supporting two individuals	
Parcel B (MUP 09-014)	Desert saltbush scrub	53.0 acres	106.0 acres	County of San Diego
Northern Transmission Corridor	Desert saltbush scrub	2.35 acres	4.70 acres	CA Public Utilities Commission (CPUC)
	Stabilized and partially stabilized desert dunes (22200)	0.07 acre	0.14 acres	
	Gander's cryptantha	Three individuals	Habitat supporting six individuals	
Southern Transmission Corridor	Desert saltbush scrub	2.0 acres	4.0 acres	CPUC
SDG&E Substation Expansion	Desert saltbush scrub	1.0 acre	2.0 acres	CPUC

1.0 INTRODUCTION

1.1 Purpose of the Report

This biological resource report has been prepared to identify the biological resources present on two parcels totaling approximately 340.84 acres, on a portion of land owned by SDG&E at the Borrego Valley Substation, and on two potential transmission line corridors in the unincorporated community of Borrego Springs in San Diego County, and to determine the potential impacts of proposed development. Included are recommended measures to avoid, minimize, and/or mitigate significant impacts in compliance with federal, state, and local regulations including the California Environmental Quality Act (CEQA), the County of San Diego's Resource Protection Ordinance (RPO), and the County's Guidelines for Determining Significance for Biological Resources.

1.2 Project Location and Description

The Project would result in the construction, operation and maintenance of a photovoltaic (PV) solar farm within the community of Borrego Springs, California in northeastern San Diego County. Eurus Energy America Corporation's wholly owned subsidiary or its affiliates, EE Borrego Land LLC (herein referred to as Eurus Energy) proposes to develop such facilities to allow for the long-term generation of clean energy from solar power that would ultimately be sold and distributed for public consumption.

The Project would consist of two separate solar generation facilities on two individual parcels of land, with additional lands affected to allow for the transport of power generated to the existing Borrego Substation. The County Assessor Parcel Numbers (APNs) affected by the Project for the main facilities include 141-230-26 (approximately 288 acres) and a portion of 141-230-33 (approximately 53 acres - to be leased by the Project proponent). Access to the 288-acre parcel and 53-acre lease parcel would be provided from Palm Canyon Drive via an existing 12- to 16-foot wide decomposed granite (d.g.) road.

The facilities would consist of an array of fixed-tilt, non-tracking solar PV panels, inverter/switching gear housed in 38 12-foot by 26.5-foot structures, one 20-foot by 30-foot storage shed, two onsite substations, and supporting transmission facilities. Energy generated will be transferred to the existing Borrego Substation, located approximately one mile to the west of the 288-acre parcel, adjacent to Borrego Valley Road, via a series of overhead transmission lines. The transmission lines will extend from the 288-acre parcel to the Borrego Substation along one of two identified routes: 1) west from the northwesterly corner of the parcel within an existing 20-foot easement maintained by San Diego Gas and Electric (SDG&E) (overhead facilities); or, 2) south from the southwesterly corner of the parcel along an existing roadway to Palm Canyon Drive (underground), west along Palm Canyon Drive (overhead), then north along Borrego Valley Road (overhead). Project-related improvements at the existing Borrego Substation will occur in the area immediately to the south of the existing fenced facilities. Project-related improvements at the Borrego Substation will affect an area of up to

approximately 1.0 acre, and will include installation of a new 69 kV termination rack (bus bar), associated conductors and insulators, two breakers, two disconnect switches, and associated protection and control equipment. A “breakaway” perimeter fence 8 feet in height topped with one foot of barbed wire (similar to existing fencing around the Borrego Substation facilities) will be installed for security purposes. It is anticipated that construction will begin in the fall of 2010 and completed by June 2011. All staging for Project construction would be done on-site.

A photovoltaic system, as proposed here, generates electricity directly from incident sunlight, as contrasted to solar thermal systems, which use incident sunlight to heat water to produce steam to drive generation of electricity. Photovoltaic systems do not require large amounts of water. Water will be used to wash the panels; this will be done 0-2 times per year. The Project would use approximately 2.5 acre-feet of domestic water. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project’s contribution to cumulative impacts to groundwater resources.

The subject properties are located in the community of Borrego Springs in San Diego County (Figure 1). They are located in Township 10 South, Range 6 East, in Sections 34 and 35 of the USGS Clark Lake Quadrangle (Figure 2), north and west of the Borrego Valley Airport, north of Palm Canyon Drive. Initially, three properties were evaluated:

Parcel A: APN No. 141-230-26, 288.29 acres

Parcel B: APN No. 141-230-33, 52.55 acres

Parcel C: APN No. 141-210-24, 9.07 acres

At the time of the initial field surveys, all of Parcel B (104.38 acres) and Parcel C (9.07 acres) were included. Subsequent to further study, approximately the eastern half of Parcel B was excluded from the Project area, leaving approximately 52.55 acres of this parcel to be leased and Parcel C was entirely deleted.

The surveys also included two potential transmission corridors. The Northern Transmission Corridor would run from the northwestern corner of Parcel A west to the existing substation along Borrego Valley Road (Figure 2). The ROW for the Northern Transmission Corridor would consist of a 20-foot wide strip along the southern boundary of Section Line 27, as well as a 200-foot arc in the northeast corner of Section 34. The Northern Corridor is within an SDG&E easement.

The Southern Transmission Corridor would run along a dirt road immediately west of the Borrego Airport runway. The dirt road runs north from Palm Canyon Drive for a distance of about 1200 feet until it meets the southwest corner of Parcel B (Figure 2). The Southern Transmission Corridor would include 60 feet east of the centerline of the dirt road and 40 feet to the west. This portion of the Southern Corridor is controlled by the San Diego

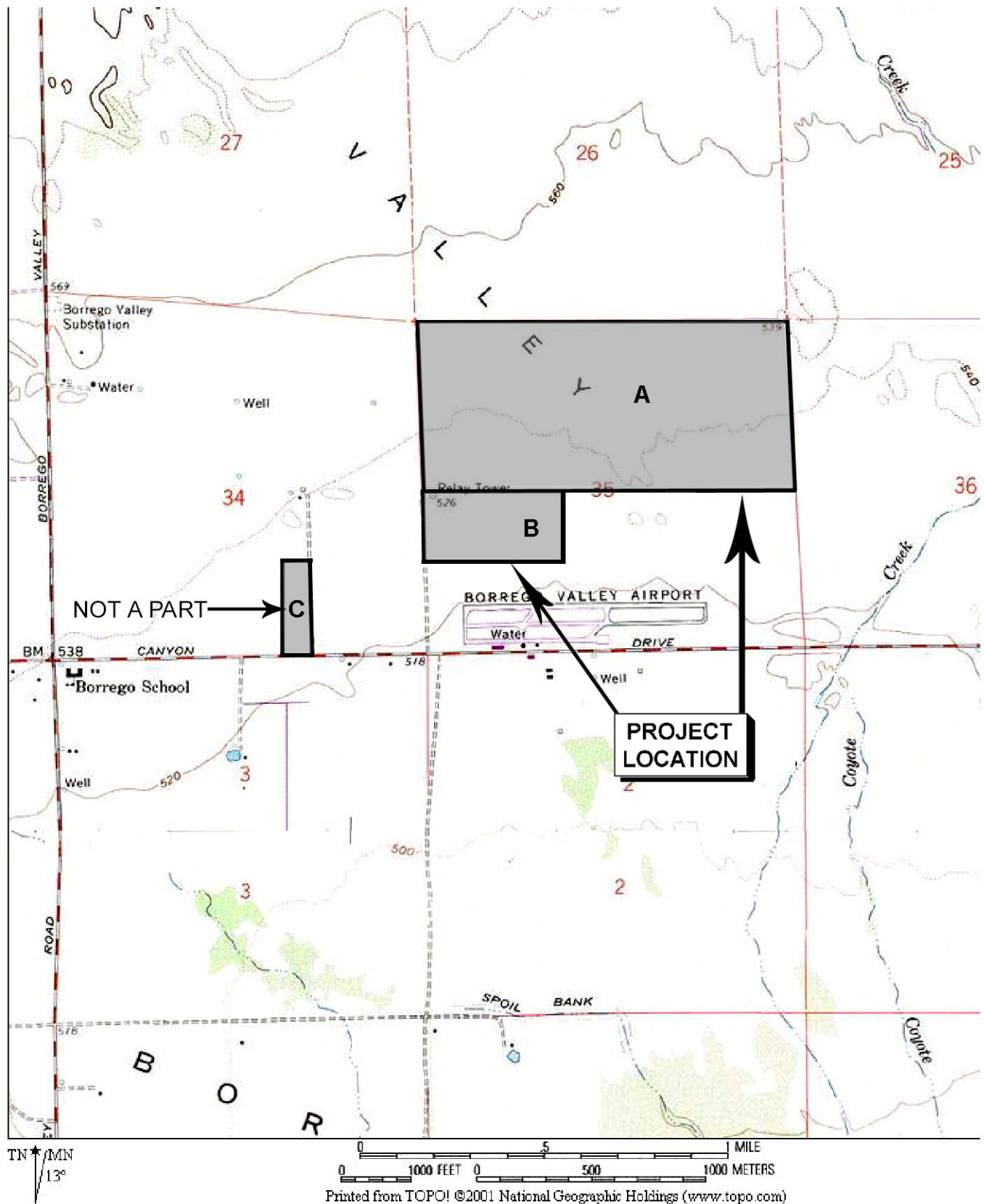


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REGIONAL LOCATION IN SAN DIEGO COUNTY

FIGURE 1



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PROJECT LOCATION ON USGS 7.5' CLARK LAKE QUADRANGLE

FIGURE 2

County Department of Public Works, Airport Division. Project transmission would join the existing power line that runs along the north side of Palm Canyon Drive and then along the east side of Borrego Valley Road to the existing Borrego Valley substation (Figure 2). Some of the wooden poles might be replaced or modified by the Project. The substation is located on an approximately five-acre parcel. Some expansion of the substation may be done with this Project. Accordingly, the undeveloped portion of the five-acre site was also surveyed.

1.3 Survey Methodologies

Prior to field surveys, the California Department of Fish and Game's (CDFG) Natural Diversity Database (NDDDB) program was accessed to determine if there were any sensitive plant or animal species which have been reported on site or in the vicinity. The County of San Diego's master list of sensitive species was consulted as well.

The County's Scoping Letters (September 18, 2009 and January 23, 2009) called for protocol or focused surveys on two animal species and two plant species. A protocol survey methodology has been developed only for one of these, the flat-tailed horned lizard. This protocol was developed by federal agencies for their projects on federal land. Protocol surveys were conducted in early July 2009 to determine presence/absence of the flat tailed horned lizard (*Phrynosoma mcallii*), again proposed for federal listing. The lead biologist on the lizard surveys was Kevin Clark (Scientific Collecting Permit SC-008832). Additional plant, wildlife, and habitat observations were made on these protocol lizard surveys, and that information has been incorporated into this report

Parcels A and B were first surveyed in the spring of 2009 (Table 1) to map habitats and record wildlife and plant observations. These overall surveys were timed to conduct spring botanical surveys, as many species can only be identified by the flowers or subsequent seed structures. The properties were traversed, with four to five persons walking meandering transects approximately 200 feet apart, depending on visibility and terrain. Binoculars were used to assist in field identification of wildlife and avifauna. Subsequent to those surveys, additional surveys were conducted to assess habitat in the area for off-site impacts associated with potential off-site transmission corridors.

The winter of 2009 - 2010 brought rain at spaced intervals, conditions that favor emergence of more annual plant species. Parcels A and B were surveyed again for rare plants in early March of 2010. The potential expansion area of the substation, the northern transmission corridor and adjacent arc, and the southern transmission corridor were also surveyed. The properties were traversed, with four to five persons walking meandering transects approximately 20 yards apart over the open saltbush scrub areas. The interval was reduced to approximately 10 yards in the sand areas of the northwest and northeast, as this habitat has a higher potential for sensitive species. In 2010, much of the Project area was heavily overgrown by the non-native weed *Malva neglecta* and with various non-native mustard species.

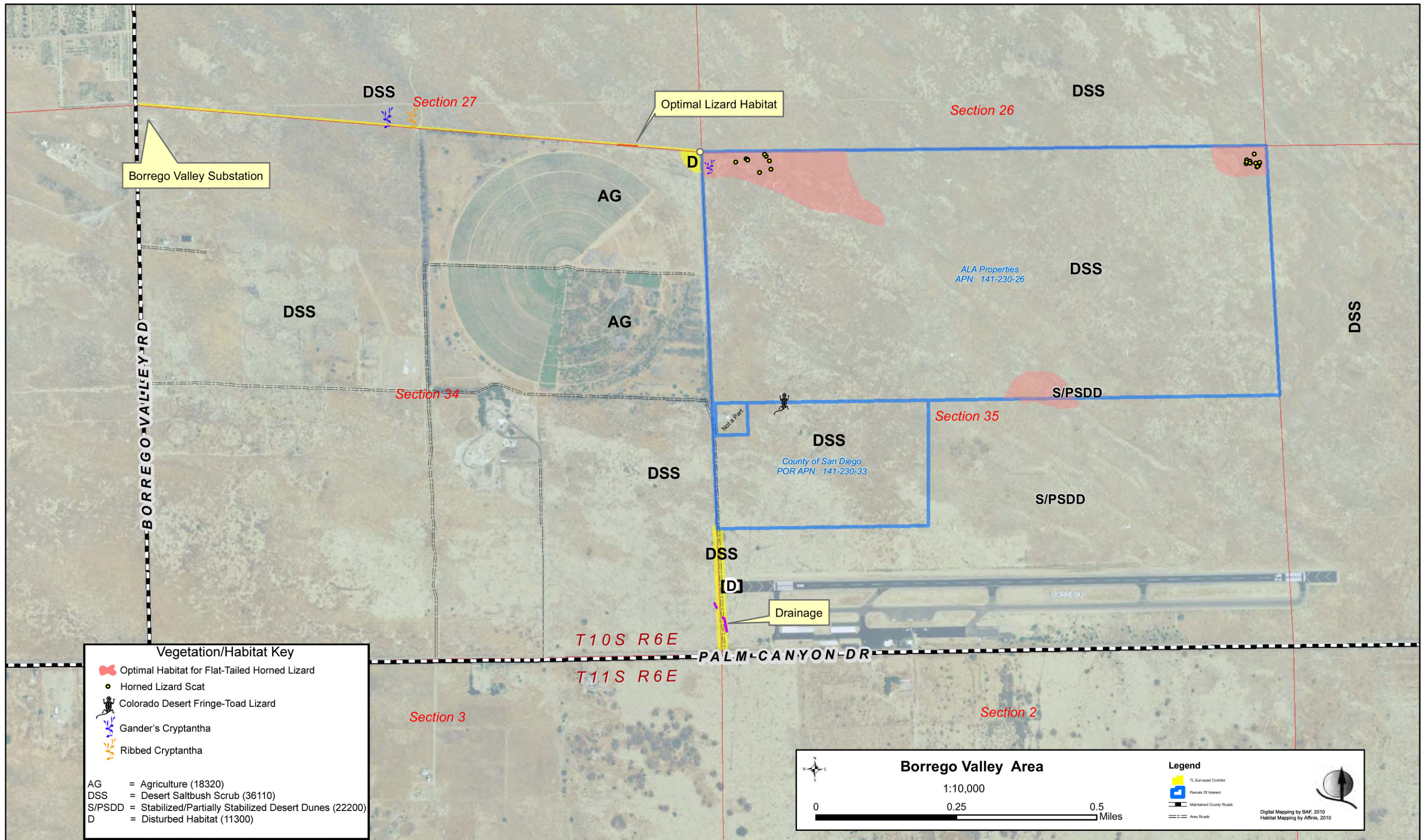
No protocol survey methodology has been developed for the Colorado Desert fringe-toed lizard (*Uma notata notata*). A focused search for this lizard was conducted during the summer protocol surveys for the flat-tailed horned lizard, as its period of highest activity coincides with that of the flat-tailed horned lizard. All field observers on all surveys were aware of the potential presence of this relatively large, fast-moving lizard.

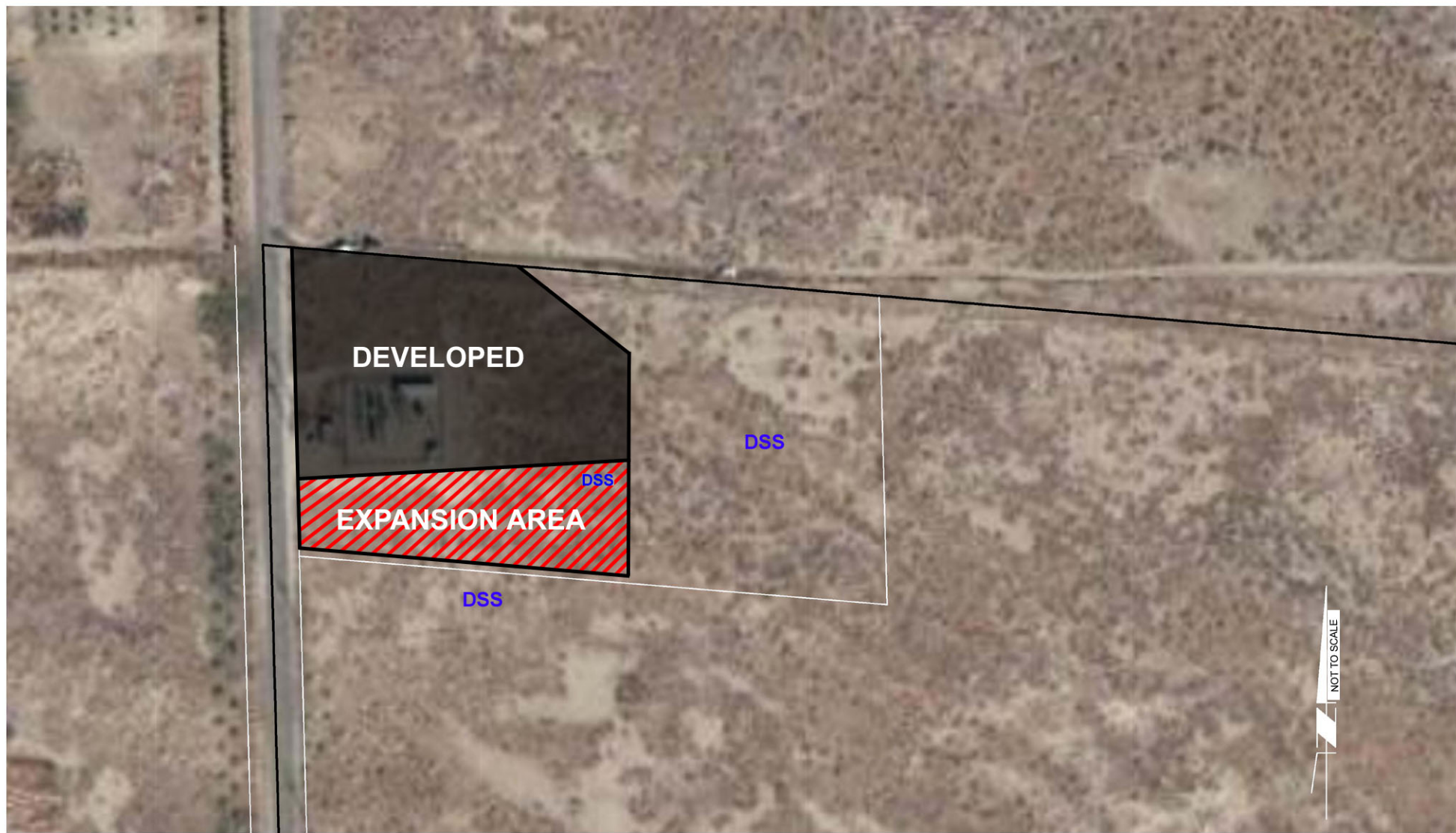
No protocol survey methodology has been developed for either of the two plant species, Peirson's milkvetch (*Astragalus madgalenae peirsonii*) or Gander's cryptantha (*Cryptantha ganderii*). These plants are best identified with the flowers and seeding structures, and focused searches for both were completed during the spring field surveys. All field personnel on all surveys were made aware of the potential presence of these species, and had reference color photos and descriptions. The Borrego Valley supports other species of cryptantha in addition to Gander's cryptantha. Some of the cryptantha plants found in the early March surveys of 2010 did not have mature seeding structures, precluding species-specific identification. Rains ceased after the early March field surveys, and the temperatures warmed. Accordingly, the area was revisited in mid-March and again in late March (Table 1) to collect additional specimens with more mature seeding structures.

Only four individuals of Gander's cryptantha, a County List A annual plant species, were identified at two locations on the early March 2010 surveys (Section 1.4.5). The properties were heavily overgrown with *Malva neglecta* and mustard species in 2010. Given these field conditions and so few plants found, a more intense search and quantification of all cryptantha individuals was done on a subset of the property to help define the likely limits of occurrence (LLO). Two one-acre sample plots were marked off in the northwestern portion of Parcel A. This area was chosen as it has the apparent most suitable habitat for Gander's cryptantha – a fine sand substrate. Twelve person-hours were spent slowly walking transects across the sample plots, noting and identifying all cryptantha individuals (Table 1). All parts of the sample plots were searched intensively, including areas heavily overgrown with the non-native weeds.

Habitats were mapped on base color aerial photography (Figures 3 and 4). Plant and animal species observed were recorded. Locations of sensitive species and/or potential habitat for sensitive species were plotted using a Sokkia Axis 3 GPS System and a Sokkia GIR 1600 Differential GPS Receiver, each with Data Collector and IMAPS Software. These GPS systems and a Bushnell Compact 800 Rangefinder were also used to locate property boundaries and features of interest.

Nomenclature for plant species is according to Baldwin et. al (2002) and Beauchamp (1986); and for animals is according to the National Geographic Society (1983), American Ornithologists Union (DeBenedictis, 1989), Jameson and Peeters (1988), and Stebbens (1985). Plant





DSS = DESERT SALTBUCH SCRUB (36110)

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VEGETATION MAP, SUBSTATION EXPANSION AREA

FIGURE 4

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Table 1. Survey Dates

DATE	TIME*	WEATHER	ACTIVITY	PERSONNEL
03-25-09	11:00 am -04:30 pm	Sunny, calm to strong west wind at day's end; 84°-92°	Spring survey of Parcel A	Adams, Busdosh, Clark, and crew
03-26-09	08:00 am -11:30 am	Sunny, calm to light breeze, 70°-86°	Spring survey of Parcel B	Adams, Busdosh, Clark, and crew
03-26-09	12:00 pm -02:00 pm	Sunny, light breeze, 86°	Spring survey of Parcel C	Adams, Busdosh, Clark, and crew
06-10-09	09:30 am -10:00 pm	Partly cloudy, light westerly breeze, 80° to 84°	Survey of Southern Transmission Corridor	Adams and Busdosh
07/01/09	06:00 am -10:30 am	Start clear and calm, 78°; end thunderstorm approaching, south wind 10 mph, 92°	Lizard survey	Clark
07/01/09	02:30 pm -03:30 pm	Start overcast, humid, slight drizzle, calm 94°; end, overcast, calm, 94°	Lizard survey	Clark
07/01/09	05:30 pm -06:30 pm	Start partly cloudy, NW wind 4 mph, 97°; end not recorded	Lizard survey	Clark and Busdosh
07/02/09	06:20 am - 08:45 am	Start partly cloudy, calm, 80°; end partly cloudy, calm, 94°	Lizard survey	Clark and Busdosh
07/02/09	09:30 am - 12:50 pm	Start clear, calm, 96°; end clear, calm, 104°	Lizard survey	Clark and Busdosh

07/02/09	07:00 pm - 08:30 pm	Start clear, west wind 8 mph 100°; end clear, west wind 10 mph, 96°	Lizard survey	Clark and Busdosh
07/03/09	06:00 am - 11:25 am	Start clear, calm, 80°; end clear, SW wind 5 mph, 104°	Lizard survey	Clark and Busdosh
11/20/09	11:00 am - 01:30 pm	Sunny, calm to light breeze, 75°-80°	Northern transmission line corridor survey	Adams and crew
03/08/10	10:00 am - 04:30 pm	Partly cloudy, variable winds, 60s - 70s	Spring survey of northern and southern transmission corridors, substation expansion area, Parcel A	Adams, Busdosh, and crew
03/09/10	08:00 am - 12:00 pm; 01:30 pm - 05:00 pm	Windy, 55-60°	Spring survey, Parcels A and B	Adams, Busdosh, and crew
03/10/10	08:00 am - 09:00 am	Sunny, light breeze, 60s	Spring survey, Parcel A	Adams, Busdosh, and crew
03/21/10	09:00 am - 10:00 am	Sunny, 70s	Collect specimens	Crew
03/26/10	09:30 am - 01:30 pm	Sunny, 70s	Quantification of Cryptantha on sample area	Adams, Busdosh, and crew

* Reflects a total of 90+ person-hours in the field in 2009 and 109.5 person-hours in 2010.

community classification is according to Holland (1986) and the Holland/County Codes (revised March 2005).

1.4 Environmental Setting (Existing Conditions)

The Borrego Valley is forming as a northwesterly extension of the Salton Trough, formed by a rifting projecting northward from the Gulf of California. The modern trace of the San Andreas fault, the Gulf of California, and the Salton Trough began forming between four and six million years ago (Hall, 2007). This is a geologically active area, with large blocks being uplifted and intervening blocks sinking (Remeika & Lindsay, 1992). These authors note “Borrego Valley, more correctly called ‘Borrego Basin,’ is one of these (sinking blocks).” These processes, not the erosional processes of a stream or streams, created (and are continuing to create) the Borrego Valley. Four soils were mapped within the survey area by the U.S. Soil Conservation Service (Bowman, 1973). Most of the area is underlain by Indio silt loam (InA) and Indio silt loam, saline (IoA), both with 0-2% slopes. Rositas fine sand, 0-2% slopes (RoA), and Rositas fine sand, hummocky, 5-9% slopes (Rrc), are also present (Figure 5).

1.4.1 Regional Context

An aerial view of the region is shown in Figure 6. The airport is shown in the center of Figure 6, with the site immediately to the north. Overall drainage is largely by sheet flow, from northwest to southeast, terminating in the Borrego Sink approximately four miles away. Anza-Borrego State Park surrounds the Borrego Valley, as shown in the green border lines of Figure 6. The Anza-Borrego State Park is the single most-dominant land use in the region, encompassing in excess of 600,000 acres. The developed complex shown to the west of the airport and Project site is the Road Runner Club, an RV Park. The large complex to the southwest is a golf course development. Further west is the “downtown” area of Borrego Springs. There are open areas to the north, and then agricultural fields. The Borrego Badlands, mostly within the state park, are approximately five miles to the east.

Immediately west of Parcel A is a large, irrigated agricultural operation (Figure 3). South of this agricultural area is the De Anza Ready Mix facility. A school is located approximately one mile to the west, at the intersection of Palm Canyon Road and Borrego Valley Road.

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SOILS MAP

FIGURE 5

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AERIAL VIEW OF REGION

FIGURE 6

1.4.2 Habitat Types/Vegetation Communities

Three habitat types/vegetative associations were mapped on the parcels, substation, and transmission corridors:

- Desert Saltbush Scrub (Holland/County Code 36110)
- Stabilized and Partially-Stabilized Desert Dunes (Holland Code 22200)
- Disturbed Habitat (Holland/County Code 11300)

Parcel A. The majority of this parcel (285.36 acres) supports primarily a monotypic habitat dominated by saltbush (*Atriplex polycarpa*), with sparse groundcover consisting of mallow (*Malva neglecta*), Mediterranean grass (*Schismus barbatus*), and mustard (*Brassica tournefortii*) (Figure 7). Thus it has all been mapped as Desert Saltbush Scrub (Figure 3). A number of native wildflower species were found, including desert pincushion (*Chaenactis stevioides*), woolly daisy (*Eriophyllum multicaule*), desert sunflower (*Geraea canescens*), desert dandelion (*Malacothrix glabrata*), sand verbena (*Abronia villosa*), and desert lily (*Hesperocallis undulata*). Overall, however, the wildflowers were not abundant in 2009 (e.g., only one desert lily was observed on the 288-acre parcel), with the non-native Mediterranean grass and mustard more prevalent (Appendix 1). In 2010, the parcel was heavily invaded by malva and mustard, but a fair number of wildflowers noted in 2009 were found. Additionally, new wildflowers noted included yellow comet (*Mentzelia affinis*), spectacle pod (*Dithryea californica*), and several *Cryptantha* spp. (Appendix 1).

Approximately 2.93 acres of stabilized and partially-stabilized dunes are found along the southern boundary of this parcel. The topography of this small on-site area is characterized by several dune ridges (Figure 7), which continue off-site to the south. While this code is not recognized in Oberbauer's revised Holland/County codes, this is the Holland habitat type which most closely approximates the on-site condition.

Parcel B. The habitat on parcel B (52.55 acres) is largely the same as on Parcel A (Desert Saltbush Scrub), but not as weedy, and it supports more wildflowers than Parcel A. Additionally, ~~suaeda (*Suaeda nigra*)~~ greasewood (~~*Sarcobatus vermiculatus*~~) is intermixed with the saltbush. Appendix 3 provides a list of the plant species observed on this parcel.

Substation Expansion. The substation expansion area (1.0 acre) is very heavily invaded by mustard species, but also supports a sparse cover of desert saltbush scrub (Figure 9). Very few wildflowers were found in this area due to the prevalence of the mustard.

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PARCEL A

FIGURE 7



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PARCEL B

FIGURE 8

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SUBSTATION EXPANSION**FIGURE 9**

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Northern Transmission Corridor. The 20-foot wide Northern Transmission Corridor encompasses approximately 2.35 acres of Desert Saltbush Scrub and 0.07 acre of Stabilized and Partially-Stabilized Desert Dunes. The southern boundary of the corridor is the section line, roughly shown by the fenceline in Figure 10, with the agricultural area south of the fence and corridor. Vegetation is sparser at the western end of the corridor. The 200-foot wide off-site arc (in the northeastern corner of Section 34) covers approximately 0.46 acre of Disturbed land, having been used for agricultural purposes (primarily stockpiling slash).

Southern Transmission Corridor. The 100 foot-wide Southern Transmission Corridor encompasses approximately 2.5 acres, and is also dominated by Desert Saltbush Scrub (Figure 11). Also found in this area were a few alkali goldenbush (*Isocoma acradenia* ssp. *eremophyla*) and one creosote bush (*Larrea tridentata*). One area (approximately 0.5 acre) was mapped as Disturbed, as it is currently being covered with asphalt as part of on-going airport operations (Figure 11). Overall, the southern portion of this site west of the airport is largely disturbed. Along Borrego Valley Drive and Palm Canyon Road, the existing road right-of-way was graded adjacent to the existing power poles (Figure 12).

1.4.3 Flora

PARCEL A. A total of 25 vascular plants were observed on Parcel A; 80% of those were native species (Appendix 1). The non-native malva, mustard, and Mediterranean grass were pervasive throughout the parcel. One sensitive plant species, Gander's cryptantha (*Cryptantha ganderi*), was found on Parcel A (see Chapter 3.0).

PARCEL B. Thirty plant species were found on Parcel B; of those, 9 (30%) were non-native (Appendix 3). Overall, this parcel had more wildflower species in greater numbers.

Habitats and species found along the Southern Transmission Line corridor were similar to those found on Parcel A. Habitats and species found on the Northern Transmission corridor line were similar to those found on Parcel A; Gander's cryptantha as well as ribbed cryptantha (*C. costata*) was also found in this area.

1.4.4 Fauna

PARCEL A. Twelve species of birds, four mammal, three reptiles, and five butterfly species were observed on this parcel (Appendix 2). One sensitive bird, the loggerhead shrike, was found on-site; this is discussed further below under the discussion of sensitive species. Coyote (*Canis*

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NORTHERN TRANSMISSION CORRIDOR

FIGURE 10

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Affinis
 Shadow Valley Center
 847 Jamacha Road
 El Cajon, CA 92019

SOUTHERN TRANSMISSION CORRIDOR

FIGURE 11

**Affinis**

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**DISTURBANCES ON SOUTHERN
TRANSMISSION CORRIDOR****FIGURE 12**

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latrans) scat was noted and coyotes were also observed; a coyote den was also found during the 2010 survey. Black-tailed jackrabbits (*Lepus californicus*) were observed in several locations.

Both the desert kangaroo rat (*Dipodomys deserti*) and Merriam's kangaroo rat (*D. merriami*) were also detected. Reptiles found included side-blotched lizard (*Uta stansburiana*), western whiptail (*Apidocelis tigris*), and Colorado desert sidewinder (*Crotalus cerastes laterorepens*). During a field visit on August 21, 2009, County biologist Monica Bilodeau observed one individual Colorado Desert fringe-toed lizard (*Uma notata notata*) along the boundary of Parcels A and B.

PARCEL B. Ten species of birds were found on this parcel (Appendix 4); the shrike was seen here as well. The same mammals were present as on Parcel A, with two coyote dens also found. In addition to the side-blotched lizard, a Colorado desert sidewinder was also noted on this parcel (Appendix 4).

CORRIDORS AND SUBSTATION EXPANSION AREA. Similar species were noted along the Northern Corridor, but little wildlife was noted on the Southern Corridor due to the disturbed nature of much of this area. Nonetheless, one sensitive species, northern harrier (*Circus cyaneus*) was observed flying across the Southern Corridor on one occasion in 2010.

No wildlife species were observed on the Substation Expansion area. Habitat quality here is generally poor due to the dominance of non-native vegetation, but common rodents and reptiles found elsewhere in the Project area could potentially occur.

1.4.5 Sensitive Plant Species

As noted in Table 1, spring surveys were conducted on Parcels A, B, and C in March, 2009 to search for potentially-occurring rare plant species. The surveys were repeated in March of 2010. No federal- or state-listed rare or endangered species were observed on any of the parcels, nor within the potential transmission corridors (see Table 1 in Appendix 7).

Directed surveys were done for Peirson's milk vetch (*Astragalus magdalenae peirsonii*), a federal-listed Threatened and state-listed Endangered species and for Gander's cryptantha (*Cryptantha ganderii*), a County List A and a California Native Plant Society List 1B species.

Peirson's milk vetch

Peirson's milk vetch is a perennial shrub growing to 36 inches in height. No individuals of Peirson's milk vetch were observed on the surveys. It is known in the United States only from the Algodones Dunes area, approximately 75 miles from the Project area.

Gander's cryptantha

Gander's cryptantha is an annual plant species reported from Mexico, Arizona, and California. It is a County List A sensitive species. On December 16, 2009, USFWS announced a 90-day finding on 192 species from a petition to list 475 species in the southwestern United States (Federal Register, Vol. 74, No. 240, pp 66866 - 66905), including Gander's cryptantha. USFWS found "Based on our evaluation of the information provided in the petition, we have determined that the petition does not present substantial information to indicate that listing *Cryptantha ganderi* may be warranted." It has been reported from various locations in the Borrego Valley. As an annual, it is likely not present in all years, and the locations in which it does occur can also vary from year to year, depending on microhabitat and precipitation patterns. It was not found on the 2009 surveys, but was found in 2010. Three individuals were found together on the Northern Transmission Corridor and one individual was found on Parcel A. The follow-up work on the two one-acre sample plots found a total of 22 cryptantha specimens, but none were *ganderi*.

Ribbed cryptantha

Ribbed cryptantha (*Cryptantha costata*) is an annual herb found in desert dunes, Mojavean desert scrub, and Sonoran desert scrub in sandy soils. It has been reported from Imperial, Inyo, Riverside, San Bernardino, and San Diego Counties in California; as well as from Arizona and Baja California. It is a CNPS List 4 and County Group 4 species. It is a County List D sensitive species. Approximately five plants were found on the Northern Corridor, near the northwestern corner of the adjacent agricultural parcel (Figure 3).

1.4.6 Sensitive Animal Species

Two sensitive bird and one sensitive reptile species were observed on Parcels A and B, and potential habitat for another sensitive reptile exists on portions of those parcels as well.

Loggerhead Shrike

The Loggerhead Shrike (*Lanius ludovicianus*) is a California Species of Special Concern and a County Group 1 Sensitive Species. It occurs throughout the lower elevations of the state but is found at its highest densities in the deserts (Yosef 1996). It is a year round resident in southern California, though its numbers are augmented by wintering birds arriving from the north (Unitt 2004). Formerly a common species, it has declined markedly throughout the state and has been extirpated from some coastal areas (Humple 2008). In San Diego County, the shrike is most common in the Anza-Borrego Desert, where it is widespread at low densities (Unitt 2004). Shrikes range over large areas of open vegetation, perching on high points to spot prey items such as lizards, birds, rodents, and insects.

One loggerhead shrike was observed on both survey days in 2009. It was singing and perching on the few large mesquite (*Prosopis glandulosa*) trees on Parcels A and B. Its behavior suggested it was likely breeding on or adjacent to the property. The open, sparsely vegetated nature of the property with widely spaced high perches provides high quality habitat for this species.

Northern Harrier

The northern harrier (*Circus cyaneus*) is a California Species of Special Concern and a County Group 1 species. It is found in grasslands, coastal salt and freshwater marshes, and agricultural fields. It nests and forages in grasslands, from salt grass in the desert sink to mountain cienagas and nests on the ground in shrubby vegetation, usually at marsh edges. Nests are built of a large mound of sticks in wet areas. As noted above, a harrier was observed flying over the Southern Transmission line corridor late in the afternoon during the March 8, 2010 survey. No suitable nesting habitat is present within the corridor or Project area for this species.

Colorado Desert fringe-toed lizard (CDFTL)

The Colorado desert fringe-toed lizard (*Uma notata notata*) is a California Species of Special Concern and a County Group 1 Sensitive Species. Its habitat and distribution is on fine, windblown sand fields throughout southeastern California (Jennings and Hayes 1994; Lemm, 2006). It has been recorded from the northeastern portion of the Borrego Valley (Jennings and Hayes 1994). It has declined due to the same habitat fragmentation and degradation issues as the flat-tailed horned lizard (see discussion below). While it was not found on-site during protocol surveys conducted for the flat-tailed horned lizard (discussion follows), it was observed moving between Parcels A and B by County staff during a field visit on August 21, 2009.

Optimal potential habitat for this species was found in the same area of the site as the optimal habitat for the flat-tailed horned lizard. The California Department of Fish and Game's Natural Diversity Database notes for this species "Requires fine, loose, windblown sand (for burrowing)..." Much of these dunes have been heavily invaded by Sahara mustard (*Brassica*

tournefortii) and one of the mallow weeds (*Malva neglecta*), which restricts the open nature of the habitat, potentially limiting the quality of this area for the CDFTL, which relies on speedy movement over open sand to escape predators.

Flat-tailed horned Lizard (FTHL)

The flat-tailed horned lizard (*Phrynosoma mcallii*) is found in a restricted area of low desert habitat in southeastern California, southwestern Arizona, and adjacent Mexico. This species has been recorded from the Borrego Valley region, which is at the western edge of the range (Jennings and Hayes 1994). Lemm (2006) reported the species is rarely encountered in San Diego County. This lizard was proposed by the U.S. Fish and Wildlife Service for listing as a threatened species under the Endangered Species Act in 1993. In 2003, this proposal was withdrawn due to ongoing conservation efforts, such as the establishment of a Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). Ensuing court actions resulted in the status being opened once again, and the proposal for listing being again withdrawn in 2006. As a result of further court actions, on March 2, 2010 USFWS announced it had reinstated the proposal to list the species as threatened – “This document serves to notify the public of the reinstatement of the 1993 proposed rule, announce public hearings, and solicit information regarding the species and threats to it and its habitat” (Federal Register Vol. 75, No. 40, pp 9377-9379). It is currently considered a California Species of Special Concern.

This species is typically found in sandy flats and dunes, often supporting sparse desert vegetation such as creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), or saltbush (*Atriplex* sp.). Though this species is typically found in areas of fine windblown sand, it occasionally is found in badlands, saltbush flats, and gravelly soils. The California Department of Fish and Game’s Natural Diversity Database notes for this species “Critical habitat element is fine sand, into which lizards burrow to avoid temp extremes...” This lizard is a specialized predator of ants, typically relatively large-bodied seed harvesters (*Pogonomyrmex* and *Messor*). It has declined throughout its range due to habitat fragmentation and degradation from agricultural development, urbanization, and off-road vehicle use (Jennings and Hayes 1994). It is also a County Group 1 Sensitive Species.

This lizard is found in its greatest densities at sites below 300 feet above mean sea level (AMSL). The elevation of the property (~550 ft AMSL), and restricted area of narrow sandy ridges surrounded by mud flats suggests that if this species occurs it is likely at relatively low densities.

Optimal potential habitat for this species was found on three areas of Parcel A. Within the desert saltbush scrub, approximately 14 acres in the northwestern corner and about 3 acres in the northeastern corner of Parcel A contain Rositas fine sandy soils, and the same soils occur in the 2.93 acres of stabilized and partly-stabilized dunes along the parcel's southerly border. Focused surveys were thus conducted in these areas in July 2009 (Appendix 8).

The Flat-tailed Horned Lizard Interagency Coordinating Committee is composed of representatives of federal agencies and California and Arizona state agencies. In 2003 this group prepared the most recent version of the *Flat-tailed Horned Lizard Rangewide Management Strategy*, which includes survey protocols and a Project evaluation protocol.

Horned lizard scat was found in the sandy soils along the northern boundary of Parcel A, in the northwest and northeast corners. Scat could be from the flat-tailed horned lizard or from the southern desert horned lizard (*Phrynosoma platyrhinos calidarumi*), a second horned lizard species also reported from the general area. Horned lizard scat is composed almost entirely of indigestible ant parts; it is not possible to positively determine which species of horned lizard left a particular scat. Either or both species could be present.

The Project Evaluation Protocol (Appendix 6 of the *Flat-tailed Horned Lizard Rangewide Management Strategy*) includes three criteria for species presence. Species presence is to be assumed if any of these three criteria are met.

1. "FTHLs are found; or
2. Horned lizard scat is found and the desert horned is unlikely to occur at the project site, or, as noted previously,
3. No FTHLs are found; but
 - a) FTHLs have been found within two miles of the project site, and
 - b) The habitat is continuous or suitable between the locality and the project site."

No FTHLs were found on the subject properties during the surveys, so criterion 1 is not met. Horned lizard scat was found, but it is not definitively conclusive that the desert horned lizard is unlikely to occur, as the project site is within its recorded range, and habitat is probably suitable. As such criterion 2 is not met.

As noted in Section 1.3 of this report, the California Department of Fish and Game's Natural Diversity Database program was accessed to determine if there were any sensitive species which have been reported on site or in the vicinity. Over 100 reportings of the flat-tailed horned lizard were found. Occurrence No. 69 is of a specimen collected near the airport, north of Palm Canyon Drive, and stored at Cal Poly University Pomona Museum. This location would be

within two miles of the Project site. As seen on Figures 3 and 6, the habitat is continuous and suitable between that location and the Project site. As such, under criterion 3 of this Project Evaluation Protocol, the flat-tailed horned lizard would be assumed to be present on at least portions of the Project site.

Other Sensitive Species

Several other sensitive species are of local concern in the Borrego Valley. They include the following:

1. Swainson's Hawk

Swainson's hawk is (*Buteo swainsoni*) is listed as Threatened by the State of California and is a County Group 1 Sensitive Species. This raptor is not a resident species, and does not breed in the area. Only three pairs of breeding Swainson's hawks are known in southern California, all in the Antelope Valley north of Los Angeles. Swainson's hawk is well-known in the Borrego Valley, as large numbers migrate through the area. A large, in-depth census of the migrating birds is done every year, led by local biologists and birders. Some foraging may be done on the properties. Most foraging is done associated with agricultural areas, as the rodent prey base is much larger on these areas. Peeters and Peeters (2005) note "...predation is frequently tied to agricultural activities that make various prey species more vulnerable." No roosting areas are present on the properties.

2. Burrowing Owl

Burrowing owls (*Athene cunicularia*) are a Federal Species of Concern, A CDFG species of Special Concern, an MSCP Narrow Endemic Species (Covered), and a County Group 1 species. They are found in agricultural fields, open, dry, nearly or quite level grassland, prairie, and the desert floor. They are dependant on relatively large burrowing mammals, especially the California ground squirrel (not found on the Project site). Burrows observed on the subject properties did not show any characteristics indicating burrowing owl use (pellets, bone fragments, or feathers around rodent holes).

3. Turkey Vulture

Turkey vultures (*Cathartes aura*) have no state or federal status, but are listed by the County as a Group 1 species. They are common in dry, open country, woodlands, and farmlands. They nest in rocky outcrops with protected crevices, caves, or old mines. While not observed, they may forage over the project area, but no nesting habitat is present on-site.

4. Badger

Badgers (*Taxidea taxus*) are a Federal Species of Concern, an MSCP Covered species, and a County Group 2 mammal. They are known from a variety of habitats, and have been found in the Borrego Springs area. They are primarily nocturnal, and while they could occur on-site, no burrows or diggings were observed. Additionally, the site does not support their preferred prey (ground squirrels and gophers).

Other sensitive animal species potentially occurring but not observed on-site are listed in Appendix 6.

1.4.7 Wetlands/Jurisdictional Waters

A Jurisdictional Waters Study was done and is included here as Appendix 9. Information in this section is largely drawn from that study. No wetlands/ jurisdictional waters were found on Parcel A or Parcel B. The overall topography is generally descending very gradually from northwest to southeast across the region (Figure 2). No waterways or channels were found in the lower areas. No channels or indications of linear flow were found, even in the lowest areas between the ridge-like dunes.

On the Southern Transmission Corridor, two small segments of ephemeral drainages were observed, one on the west side of the dirt/gravel roadway, and one on the east side (Figure 3). These are small erosion features. The western ephemeral drainage runs southeasterly to the roadway, and then south along the roadway for a short distance before disappearing. Total length of this ephemeral segment was approximately 75 feet, with an average width of 1.0 feet. The eastern drainage runs southeasterly and then south, for approximately 125 feet, and disappears. These ephemeral drainage segments are similar to that shown in Figure 13.

The Southern Transmission Corridor borders Palm Canyon Road (Figures 3 and 4), and has a maintained road included. The areas have had ground disturbances in the past (Figures 11 and 12). These spatially-intermittent drainages appear to be the result of ground surface disturbances that concentrate runoff for short distances.

County of San Diego Jurisdiction. The ephemeral drainage segments would not be jurisdictional under the County's Resource Protection Ordinance, as they do not support a predominance of hydrophytes, the substratum is soil, and they do not substantially contribute to biological functions or values in the drainage system. These ephemeral drainages are erosion features.

They were found only on the Southern Transmission Corridor, which has been heavily disturbed. No such drainages were found anywhere on the nearby, much larger Parcels A and B, which are relatively undisturbed as compared to the Southern Transmission Corridor.

These ephemeral drainages have a soil substratum. Neither erosional feature connects to any downstream drainages. No wetland plant species were found. No remains of aquatic animal species (crustacean carapaces, desiccated amphibian larvae) were found. Any water collected in the drainages either evaporates or percolates into the soil, as does any precipitation on the adjacent upland areas. As such, these ephemeral drainages do not substantially contribute to biological functions or values in the drainage system.

Army Corps Jurisdiction. The ephemeral drainages have no surface link off the property. Surface flows in the Borrego area move to and terminate in the Borrego Sink (Figure 6), so the waters have no link to a Traditionally Navigable Water (Appendix 9). Based on these observations, the ephemeral drainage would not be federally jurisdictional under the Clean Water Act (EPA, 2008).

California Department of Fish and Game. The ephemeral drainages could be determined to be jurisdictional by the California Department of Fish and Game, as its definition includes ephemeral streams. Any alteration to an ephemeral stream – filling, placement of culverts, rerouting... – would require a Notification Package to the Department. Upon review of that packet, the Department would determine if a Streambed Alteration Agreement is needed.

Occasional flatter areas of surface soil cracks were found, mostly on the western portion of Parcels A and B (Figure 14). Cracked soil can be an indicator of wetland hydrology, but surface soil cracks “...may also occur in temporary ponds and puddles in non-wetlands; these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils.” (U.S. Army Corps of Engineers, 2008b). No hydrophytic vegetation species were found on these areas; mallow (*Malva neglecta*) and pygmy weed (*Crassula connata*) were found throughout the property, and were not concentrated on these cracked soil areas. *Malva neglecta* has no wetland indicator status, and pygmy weed is listed as Facultative, defined as “Equally likely to occur in wetlands or non-wetlands” (U.S. Fish & Wildlife, 1996). Four soil pits were dug per federal



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EPHEMERAL DRAINAGE

FIGURE 13

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CRACKED SOIL

FIGURE 14

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protocol (Environmental Laboratory, 1987; U.S. Army Corps of Engineers, 2008b). There were no indicators of wetland soil characteristics in any of the pits (Appendix 9).

Rainfall in the Borrego area, as with most desert areas, can come in intense but short thunderstorms. This can allow water to collect on these flatter areas. Some of this water then percolates down into the soil, and the rest evaporates, resulting in the cracked soil. It appears these areas do not hold enough water for a long enough period of time to support wetland plants or to allow wetland soils to develop. Average annual rainfall is 6.3 inches (Caltrans-Sonoma State-Office of Water Programs, 2009). Bowman (1973) noted the permeability for the soil type (Indio silt loam, saline) in the western portion of the parcel is "...is moderate to moderately rapid." There is little rainfall, the soil is permeable, and evaporation rates are high.

1.4.8 Habitat Connectivity and Wildlife Corridors

An aerial view of the region is shown in Figure 6, and regional features are discussed in Section 1.4.1. The airport is shown in the center of Figure 6, with the site immediately to the north. Anza-Borrego State Park surrounds the Borrego Valley, as shown approximately in the green border lines of Figure 6. Habitat connectivity has been broken up to the west by the school, the developed RV park complex, the golf course development, and the commercial area of Borrego Springs. Immediately west of Parcel A is a large, irrigated agricultural operation (Figure 3). South of this agricultural area is the De Anza Ready Mix facility. These developments, with the airport, all are fenced. The airport is bordered by a chain link fence. These existing facilities likely eliminate or greatly reduce the potential for wildlife movement to or from the west and south.

Overall habitat connectivity occurs to the undeveloped lands to the north and east, along the entire north and east boundaries (Figure 6). Observations during surveys found the proximal off-site habitat to be the same, a sparse desert saltbush scrub. It is likely all reported wildlife are also present. Topography is homogeneous, with little relief in the overall area. No linear features (watercourses, ridges, valleys) were observed. The ephemeral Coyote Creek drainage, running north-to-south is noted on maps (Figure 2) approximately one-half mile to the east, and the Borrego Badlands are approximately five miles to the east (Figure 6). There is habitat connectivity to the north and east, but no distinctive corridors. Lands to the east are mapped with a sand substrate (Figure 5), as contrasted with the silt loams that comprise most of the Project area, and may contain additional plant and animal species.

1.5 Applicable Regulations

Due to the discretionary actions involved, the Project is subject to review per the California Environmental Quality Act (CEQA). As the property is not currently within an adopted MSCP area, it is not subject to the County's Biological Mitigation Ordinance (BMO).

Modifications to the ephemeral drainages could require a Streambed Alteration Agreement with the California Department of Fish and Game.

2.0 PROJECT EFFECTS

On-site Impacts – Parcels A and B

Grading for the Project would impact nearly all of the two parcels, except for areas set aside for preservation of archaeological resources (Figures 15 and 16). This would result in the loss of 321.44 acres of desert saltbush scrub (Table 2). Habitat for the flat-tailed horned lizard, Colorado Desert fringe-toed lizard, and Gander's cryptantha would be impacted. Foraging habitat for raptor species would be impacted. Potential impacts to all of these sensitive species are discussed in Section 3. No impacts to wildlife corridors, linkages, or wildlife nursery sites would be expected.

The Project is adjacent to agricultural uses to the west, and the Borrego Valley airport is to the south. No adverse indirect impacts are expected to occur to these areas. Habitat off-site to the north and east of Parcel A could be subject to "edge effects" associated with site development (e.g., drainage, lighting, noise, etc.). A photovoltaic system, as proposed here, generates electricity directly from incident sunlight, as contrasted to solar thermal systems, which use incident sunlight to heat water to produce steam to drive generation of electricity. Photovoltaic systems do not require large amounts of water. Water will be used to wash the panels; this will be done 0-2 times per year. The Project would use approximately 2.5 acre-feet of domestic water. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project's contribution to cumulative impacts to groundwater resources. This amount of water spread over the 300+ acres is equivalent to a rainfall event of less than 0.1 inch, and it would be done over a three to four week period. This amount of water over this amount of area over this period of time would not be expected to cause adverse impacts. Should a weed problem develop around the panels, the Project would instigate a weed control program, either mechanical or spray-based or a combination, following consultation with the County of San Diego.

Off-site Impacts – Substation expansion and Transmission Corridors.

The portion of the Southern Transmission Corridor leading south from the Project to Palm Canyon Drive is expected to be entirely disturbed (2.5 acres, including 2.0 acres of desert saltbush scrub and 0.5 acre of disturbed land). No habitat is expected to be affected at the existing poles along Borrego Valley Drive or Palm Canyon Road. Habitat within the Northern Corridor consists of 2.35 acres of desert saltbush scrub and 0.07 acre of stabilized and partially-stabilized desert dunes. While 20 poles are expected to be installed, permanently disturbing 6 sq ft per pole (120 sq ft), equipment and installation activities could increase this amount, so the entire corridor is assumed to be disturbed, as well as potentially 0.46 acre of disturbed land off-site within the 200-foot wide arc. Approximately 1.0 acre of sparse desert saltbush scrub would be impacted with the substation expansion.

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3.0 SPECIAL STATUS SPECIES

3.1 Guidelines for the Determination of Significance

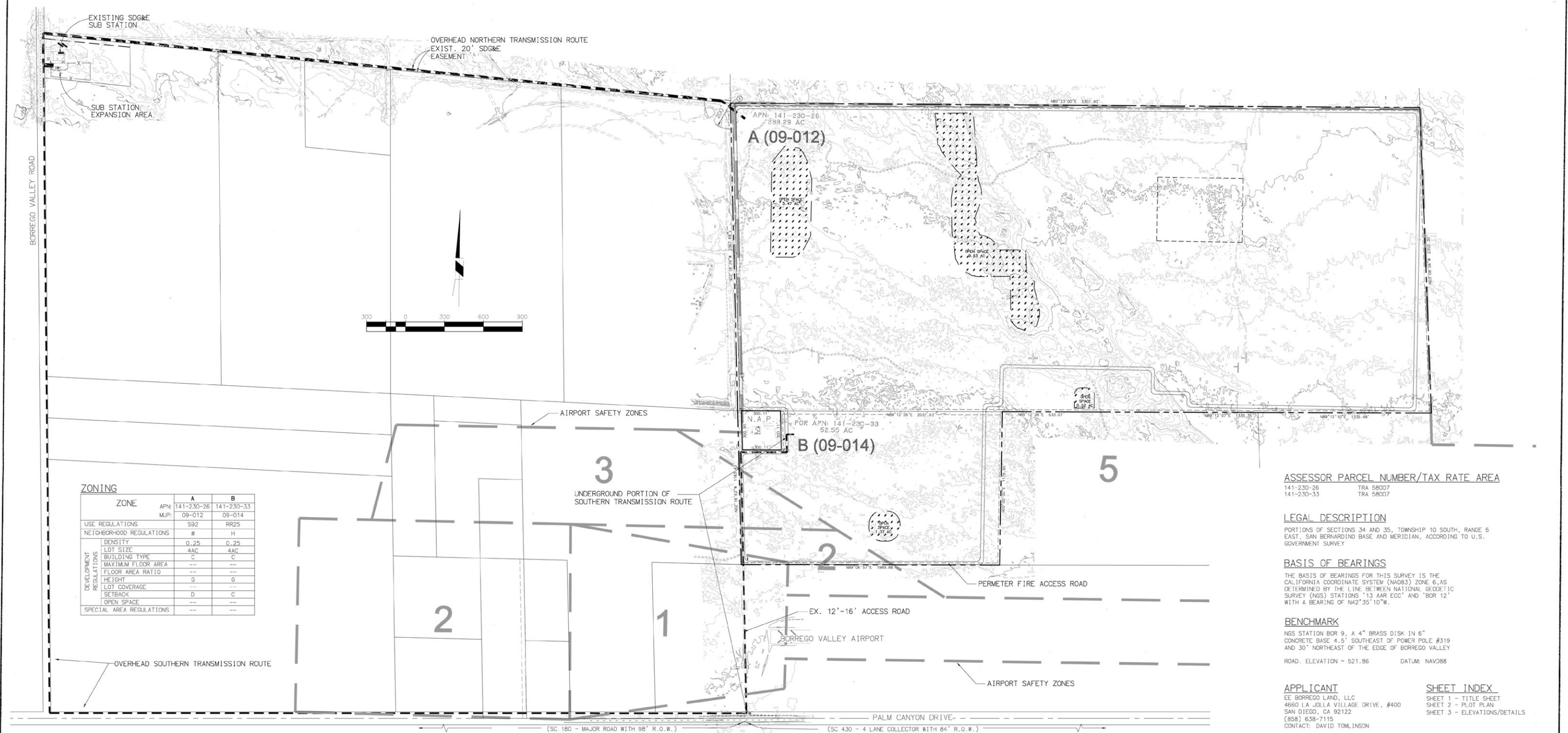
The Project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or U.S. Fish and Wildlife Service (USFWS).

Any of the following conditions would be considered significant:

- A. The Project would impact one or more individuals of a state- or federal-listed endangered or threatened species.
- B. The Project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.
- C. The Project would impact the regional long-term survival of a County Group C or D plant species or a County Group II animal species.
- D. The Project may impact arroyo toad estivation or breeding habitat.
- E. The Project would impact golden eagle habitat.
- F. The Project would result in a loss of functional foraging habitat for raptors.
- G. The Project would increase noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species.
- H. The Project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to Project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species).

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MAJOR USE PERMIT PLOT PLAN



SOURCE: RBF, 2010

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PROJECT GRADING PLANS

FIGURE 15

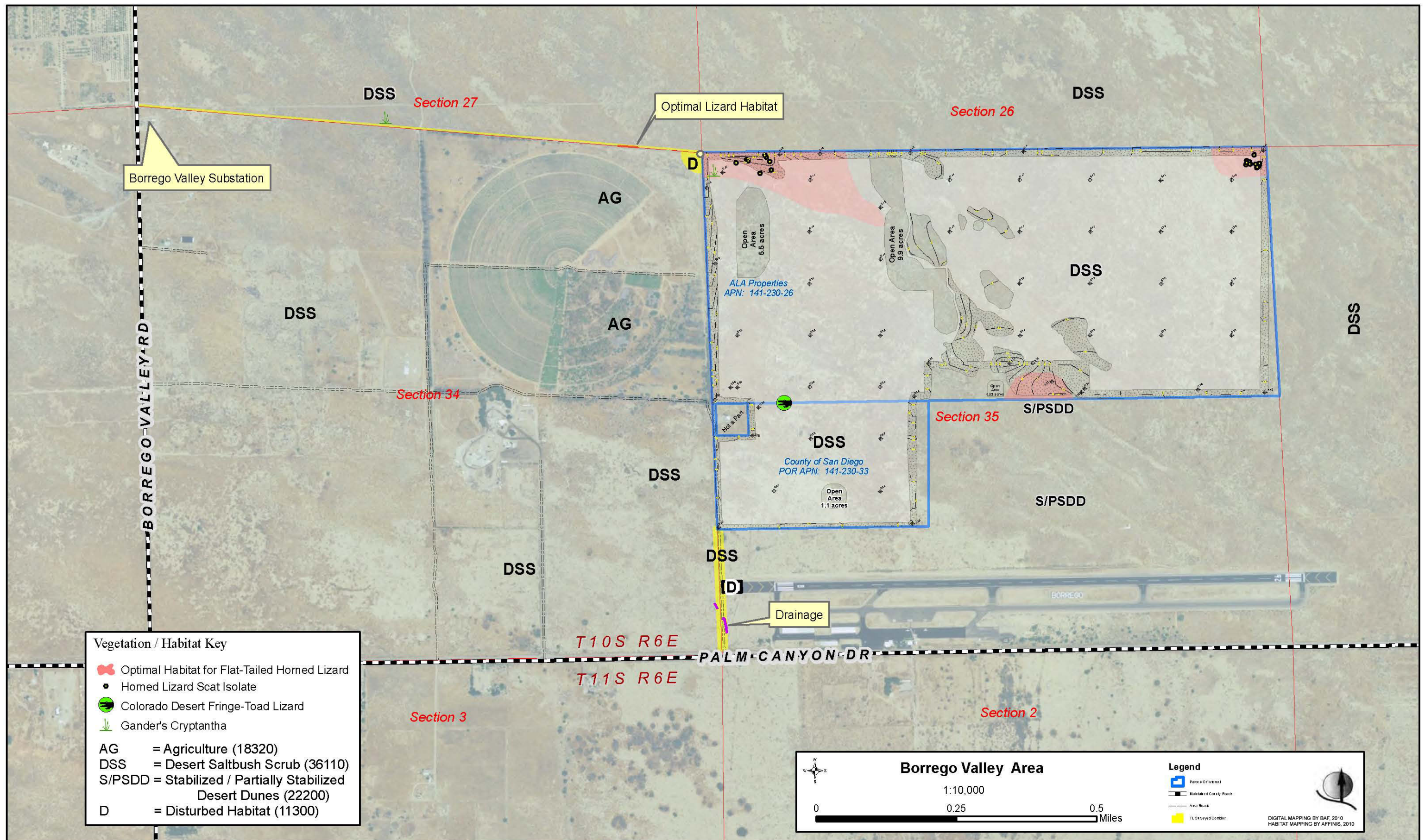


Table 2. Project Impacts

HABITAT TYPE	EXISTING ACRES	ACRES IMPACTED	OFF-SITE IMPACTS	TOTAL IMPACTS	MITIGATION RATIO ¹	MITIGATION ACREAGE REQUIRED	PRESERVED ON-SITE ²	OFF-SITE MITIGATION REQUIRED
Desert saltbush scrub (36110)	337.91	321.44	5.35	326.79	2:1	653.58	16.47	653.58 ³
Stabilized and partially stabilized desert dunes (22200)	2.93	0.00	0.07	0.07	2:1	0.14	2.93	0.14 ⁴
Disturbed habitat (11300)	0.00	0.00	0.96	0.96	0:1	0.00	0.00	0.00
TOTAL	340.84	321.44	6.38	327.82		653.72	19.40	653.72

¹ Per the County's Guidelines for Determining Significance, Table 5, for habitat types outside the approved MSCP plans.

² This acreage is for protection of archaeological resources on Parcels A and B (16.47 acres) and avoidance of dune habitat. It is too small and isolated to be counted toward biological mitigation.

³ Under conditions of MUP 09-012: 536.88 acres. Under conditions of MUP 09-014: 106.0 acres. Under CEQA document conditions: 10.7 acres.

⁴ Under CEQA document conditions: 0.14 acre.

- I. The Project would increase human access or predation or competition from domestic animals, pests, or exotic species to levels that would adversely affect sensitive species.
- J. The Project would impact nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction).

3.2 Analysis of Project Effects

The Project may have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or U.S. Fish and Wildlife Service (USFWS).

- A. No state- or federal-listed Endangered or Threatened species were observed within the Project area. Thus, the Project would not impact any state- or federal-listed endangered plant or animal species.
- B. The Project would impact habitat potentially utilized by County Group I animal species (FTHL, CDFTL, loggerhead shrike). Both the FTHL and the CDFTL prefer substrates of wind-blown fine sand (see Appendix 8; Flat-tailed Horned Lizard Interagency Coordinating Committee, 2003). The lizards can be found on adjacent habitats, but are more likely in the sand habitats. In this general area, the sandy substrate is Rositas fine sand, and is found only at the northwestern corner and northeastern corner of Parcel A (Figure 3). Rositas fine sand is extensive to the north and east of the Project, but the areas of this sand on-site are only the distal tips of extended lobes (Figure 5). As such, the Project is impacting preferred habitat only at its edges. Construction could impact individuals of either lizard species that are present on the Project site.

A single loggerhead shrike was observed, and may have been nesting. The Project would eliminate some habitat currently used for foraging, possibly nesting, and perching sites. Given the passive nature of the Project, some foraging would be expected to continue, but the degree cannot be quantified.

No nesting habitat for the northern harrier is present on-site or within the proposed transmission corridors or expansion area.

The Project would impact habitat supporting one County Group A plant species, Gander's cryptantha. One group of three individual plants was found on the Northern Transmission Corridor, and one individual was found on the northwestern corner of Parcel A (Figure 3). Habitat requirements of Gander's cryptantha are not well known. The nearest reported location is east of the airport, on sand dune habitat (Reiser, 1994). The group of three plants on the Northern

Corridor are in an area of sand (Figure 5), with nearby dune topography observed to the north. The solitary individual found on Parcel A was in sand substrate (Figures 3 and 5). No plants were found on the silt loam substrate that characterizes most of the Project site (Figure 5). While there is some potential of finding Gander's cryptantha anywhere on the site, the likely limits of occurrence (LLO) are the boundaries of the sand substrates in the northeastern corner (approximately 3 acres) and northwestern corner (approximately 17 acres) of Parcel A, and along the Northern Transmission Corridor (Figures 3 and 5). Construction could impact these plants and the LLO areas. The most probable area for Gander's cryptantha, based on habitat, would be the 2.93 acres of dune habitat along the southern boundary of Parcel A. Current project design now avoids this area.

- C. The Project would impact habitat supporting one County Group D plant species, ribbed cryptantha. Approximately five individuals were found on the Northern Transmission Corridor. Construction could impact this plant. No other County Group A, B, C or D plant species or Group 2 animal species occur on-site and thus would not be affected.
- D. The project would not impact the arroyo toad, as it does not occur here.
- E. The Project would not result in the loss of golden eagle habitat.
- F. The Project would result in the loss of some raptor foraging habitat. Raptor foraging is generally heavier on the agricultural areas of the Borrego Valley, which support a greater density of rodents, but some amount of foraging would be expected on the Project area. Some raptor foraging would be expected to continue over the Project area when built, because prey would be expected to live in and around the Project components, but the degree of foraging cannot be predicted.
- G. The Project could increase nighttime lighting.
- H. No impacts to core wildlife corridors would occur, as the area is already developed to the west and south of the Project, so movement in wildlife corridors would largely occur in the undeveloped lands to the north of the Project area.
- I. The project would not result in large numbers of persons or any domestic animals occupying the Project site; hence, the Project will not increase human access or predation or competition from domestic animals, pests, or exotic species to levels that would adversely affect sensitive species.
- J. If done during the nesting season, grading, clearing, fuel modification and/or noise-generating activities could impact nesting success for the loggerhead shrike.

3.3 Cumulative Impact Analysis

CEQA requires that a project's cumulative impacts be analyzed. A project will be found to have a significant cumulative impact where the project's impacts may be individually limited (when the project site is viewed in isolation), but cumulatively considerable.

"Cumulatively considerable" means that the incremental effects of projects are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects. CEQA requires that an appropriate cumulative study area (geographic scope) is defined when determining which projects to include in the cumulative analysis.

The cumulative impacts study area defined for this project is the area of Borrego Springs. This covers approximately 27,000 acres, including currently developed commercial, industrial, residential, airport facilities, and agricultural lands. This study area was developed with County staff, and is based on the following:

- The area including Borrego Springs is completely surrounded by the 600,000-acre Anza-Borrego State Park. The large, surrounding expanse of parkland limits most types of proposed land uses anywhere in the region to this enclosed area.
- Topography throughout the study area is similar, in contrast to the mountains immediately to the west, north, and south.
- The same overall soils and soil types are found throughout the study area, although specific soil types may vary from parcel to parcel.
- The same overall habitats are found throughout the study area, although specific habitats may also vary from parcel to parcel.
- All of the study area is within the published range of all of the sensitive species discussed above.
- Use of this study area allows inclusion of all past, present, and future projects involving the County in the overall area for the cumulative impact analysis, and is therefore the broadest study area that can be identified to fully evaluate the cumulative impacts on any species.

At the present time, the following projects are known to be pending in the Project's vicinity, for which information was available from County Project Processing:

- 1a. Borrego Country Club (TM, Permit Type: 3100, Permit Number: 5309, APN 198-021-08-00, KIVA: 04-1224).

- 1b. Borrego Country Club (Rezone, Permit Type: 3600, Permit Number: 03-006, APN: 199-010-16-00, KIVA: 04-15936)
- 1c. Borrego Country Club (Specific Plan Amendment, Permit Type: 3813, Permit Number: 05-002, APN: 199-011-04-00, KIVA: 04-15936)
- 1d. Borrego Country Club (Tentative Map, Permit Type: 3100, Permit Number: 5319, APN: 199-010-16-00, KIVA: 04-15936)
- 2a. Borrego Springs Senior Condominiums (Site Plan, Permit Type: 3500, Permit Number: 06-039, APN: 141-384-11-00, KIVA: 06-0066994)
- 2b. Borrego Springs Senior Condominiums (Tentative Map, Permit Type: 3100, Permit Number: 5512, APN: 141-384-11-00, KIVA: 16-1166994)
- 3. Desert Diamond (Tentative Parcel Map, Permit Type: 3200, Permit Number: 21017, APN: 141-030-40-00, KIVA: 06-0061867)
- 4. Bowen/Jonas (Tentative Parcel Map, Permit Type: 3200, Permit Number: 21027, APN: 198-320-03-00, KIVA: 06-0064842)
- 5a. Borrego Sand and Rock Borrow Pit (Major Use Permit, Permit Type: 3300, Permit Number: 04-034, APN: 140-050-01-00, KIVA: 04-0025048)
- 5b. Borrego Sand and Rock Borrow Pit (Reclamation Plan, Permit Type: 3310, Permit Number: 04-003, APN: 140-050-01-00, KIVA: 04-0025048)
- 6a. Borrego 50 (Site Plan, Permit Type: 3500, Permit Number: 07-019, APN: 141-080-05-00, KIVA: 06-0066737)
- 6b. Borrego 50 (Tentative Map, Permit Type: 3100, Permit Number: 5511, APN: 141-080-05-00, KIVA: 06-0066737)
- 7a. Borrego Country Club Estates (Tentative Map, Permit Type: 3100, Permit Number: 5487, APN: 198-320-01-00, KIVA: 06-0058990)
- 7b. Borrego Country Club Estates (Site Plan, Permit Type: 3500, Permit Number: 07-052, APN: 198-320-01-00, KIVA: 07-0090163)
- 8. Miller (Tentative Parcel Map, Permit Type: 3200, Permit Number: 21038, APN: 141-080-12-00, KIVA: 06-0072455)
- 9a. Yaqui Pass (Specific Plan, Permit Type: 3810, Permit Number: 08-002, APN: 200-030-24-00, KIVA: 06-0072917)

- 9b. Yaqui Pass (General Plan Amendment, Permit Type: 3810, Permit Number: 08-005, APN: 200-030-24-00, KIVA: 06-0072917)
- 9c. Yaqui Pass (Tentative Map, Permit Type: 3100, Permit Number: 5552, APN: 200-030-24-00, KIVA: 06-0072917)
- 9d. Yaqui Pass (Site Plan, Permit Type: 3500, Permit Number: 08-021, APN: 200-030-24-00, KIVA: 06-0072917)
- 9e. Yaqui Pass (Administrative Permit, Permit Type: 3000, Permit Number: 08-033, APN: 200-030-24-00, KIVA: 06-0072917)
- 9f. Yaqui Pass (Rezone, Permit Type: 3600, Permit Number: 08-006, APN: 200-030-24-00, KIVA: 06-0072917)
- 9g. Yaqui Pass (Tentative Map, Permit Type: 3100, Permit Number: 5513, APN: 199-170-32-00, KIVA: 06-0067015)
- 10. Rainshadow (Tentative Parcel Map, Permit Type: 3200, Permit Number: 21137, APN: 141-010-26-00, KIVA: 08-0101502)
- 11a. Borrego 138, Inland Land Development (Tentative Map, Permit Type: 3100, Permit Number: 5528, APN: 199-011-18-00, KIVA: 06-0073663)
- 11b. Borrego 138, Inland Land Development (Major Use Permit, Permit Type: 3300, Permit Number: 06-101, APN: 199-011-17-00, KIVA: 06-0073663)
- 12. Friestedt Major Subdivision (Tentative Map, Permit Type: 3100, Permit Number: 5559, APN: 199-220-13-00, KIVA: 08-0106087)
- 13. Henderson Canyon (Tentative Parcel Map, Permit Type: 3200, Permit Number: 21058, APN: 140-110-03-00, KIVA: 07-0076451)

The impacts of these Projects are summarized in Table 3 (see Chapter 4). Within the format of this report, the discussion of cumulative impacts to habitats in the study area is provided below in Chapter 4. Cumulative loss of habitats (prior to consideration of mitigation) is approximately 1109 acres. Loss of this amount of habitats would be considered a significant impact. Because presence assumptions made for some sensitive species are based on habitat for this report, because of the lack of information on some species, and because of the utilization (or potential utilization) of the Project site by some species, an initial discussion of habitats is necessary to best define potential cumulative impacts to sensitive species.

Gander's cryptantha. Impact analysis of Gander's cryptantha, both on a project basis and on a cumulative basis is difficult, as there is little information with which to compose a baseline. It is reported from Arizona, California, and Mexico, so it is widespread. There are approximately 13 locations reported throughout the Borrego Valley. In terms of numbers, only one reporting had more than a few individuals. Reiser (1994) reported one individual east of the Borrego Airport in one year, then found "several dozen" at the location the following year, which he noted had greater rainfall. Assuming equal effort was put forth in each year, the very large discrepancy in numbers found at the same location one year apart indicates both the presence and the abundance of this annual vary widely from year to year. Given the lack of information to exclude this annual plant from any of the native habitats in the study area, the assumption is that it could occur in any of the native habitats. The Project site comprises approximately 30 percent of the habitats impacted by the cumulative projects, and would thereby potentially have a cumulatively considerable contribution to impacts on Gander's cryptantha. Ribbed cryptantha, a list D species, would be affected similarly.

Flat-tailed horned lizard. No individuals were found on the Project site. The Project Evaluation Protocol to be used (Section 1.4.6) found the FTHL would be assumed to be present on the Project site, based on habitat(s) present and proximity to known locations of FTHL. Over 97 percent of the cumulative projects' acreage is in native habitats (Table 3), with most of that within the proximity called for in the Project Evaluation Protocol. The total impacted acreage for the cumulative projects is approximately 1109 acres (Table 3). As the Project would impact approximately 30 percent of the cumulative total, the Project would make a cumulatively considerable contribution to impacts on the FTHL.

Colorado Desert fringe-toed lizard. One individual was observed on the Project site by the County biologist. Lemm (2006) noted it is "...suited to a sand-dwelling lifestyle...restricted to dunes, flats, riverbanks, and washes... It is generally associated with areas of scant vegetation, such as creosote scrub, that has fine, loose sand." This individual was observed on an open area of Indio silt loam substrate, in the vicinity of but not on an area of Rositas fine sand. The CDFTL is potentially found in any of the native habitats of the study area; how much of these habitats have fine sand is not known. As the Project would impact approximately 30 percent of the cumulative total, the Project would make a cumulatively considerable contribution to impacts on the CDFTL.

Loggerhead shrike. The shrike is a predator, and would be expected to hunt in any of the native habitats. Nesting is possible on the Project site, although there are only a few dead mesquite trees present. The potential for nesting and successful fledging of young would be expected to be higher on the native habitats Sonoran Desert scrub, Sonoran mixed woody scrub, and Sonoran mixed woody and succulent scrub (Table 3) found elsewhere on the study area. Approximately 60 acres of these habitats are found in the study area. The Project would not make a cumulatively considerable contribution to impacts on the nesting of the shrike. As the Project would impact approximately 30 percent of the

cumulative acreage total, the Project would make a cumulatively considerable contribution to impacts to the hunting areas of the loggerhead shrike in the study area.

Northern harrier. One individual was seen along the Southern Transmission Corridor. This bird is commonly found in wet areas, grasslands, and agricultural areas. A large agricultural area is located to the north and northwest of the initial segments of the Southern Transmission Corridor. Given the lack of wet areas, grasslands, or agricultural areas, the Project site would not be expected to provide significant hunting or nesting opportunities. As such, the Project would not make a cumulatively considerable contribution to impacts to the northern harrier.

Swainson's hawk. The Project site does not provide roosting areas for Swainson's hawk. Some foraging may be done on the property, but preferred foraging is associated with the agricultural fields in the study area, as these have a larger rodent prey base (Peeters and Peeters, 2005). The Project site comprises approximately 30 percent of the native habitats impacted by the cumulative projects, and would thereby potentially have a cumulatively considerable contribution to impacts on foraging by Swainson's hawk.

3.4 Mitigation Measures and Design Considerations

A. Mitigation Measures

3.4.1 Plant Species

One List A species was found. Gander's cryptantha is an annual plant species reported from Mexico, Arizona, and California. It has been reported from approximately thirteen various locations in the general area of and around Borrego Valley. As an annual, it is likely not present in all years, and the locations in which it does occur can also vary from year to year, depending on microhabitat and precipitation patterns. Reiser (1994) noted "One plant was found growing in dunes east of the Borrego Airport. A revisit the following year to the Borrego Airport site revealed several dozen plants following a period of good rainfall." It is generally associated with dunes, so its most probable likely limit of occurrence (LLO) on this Project site are the areas of Rositas fine sand located in the northeastern corner (3 acres) and northwestern corner (14 acres), and portions of the northern transmission corridor (Figure 5). But little is known of the overall requirements of this plant, and there is an unknown potential for it to occur outside of the sand areas. Reiser also reported the plant on very gravelly loams near Clark Dry Lake, and it has been reported more recently from the Borrego Badlands (Chester, 2008) and in Anza-Borrego State Park associated with Font's Point Wash (Barth, 2005).

Ribbed cryptantha was also found in sandy soils at one location on the Northern Corridor. While considered sensitive by the CNPS and the County, it is ranked at the lowest sensitivity level by both due to its distribution and lack of listing as rare or endangered. Habitat acquisition at a 2:1 ratio will mitigate impacts to this species.

Reportings of Gander's cryptantha in the Borrego Valley region are generally of one or a few plants, and these have been associated with various substrates. As discussed above in Section 3.3, little is known of the plant's requirements. Species-specific mitigation is required for Gander's cryptantha, a County Group A species. One individual plant was found on the Project site, on Parcel A. Therefore, mitigation land acquired must include at least two individuals of Gander's cryptantha (2:1 ratio). One group of three individuals was found on the Northern Transmission Corridor. If the Northern Transmission Corridor is utilized, mitigation land must include an additional six individuals, for a total of at least eight individuals.

3.4.2 Animal Species

To provide species-specific mitigation for potential direct impacts to CDFTL and FTHL, a barrier fencing and removal program shall be implemented in accordance with Appendix 7 of the *Flat-Tailed Horned Lizard Rangeland Management Strategy* (Flat-Tailed Horned Lizard Interagency Coordinating Committee, 2003; see Appendix 8 to this report), as follows:

Fencing Protocol

Specifications for barrier fences for the exclusion of FTHLs :

1. The barrier fence shall be constructed along the entire perimeter of the Project and be inset sufficiently from the perimeter of the parcel to allow for construction and maintenance.
2. Barrier material shall be 0.25" mesh hardware cloth and 36" in height.
3. Barrier material shall be buried 6" deep, providing 30" above the surface.
4. Barrier material shall be securely attached to t-posts or fence posts and barbed wire strung at heights of 15" and 30" (A third barbed wire shall be strung above the FTHL-proof fencing, using metal clips or wire).
5. Additional t-posts or fence posts shall be placed at any junctions between rolls of hardware cloth to discourage the formation of gaps.
6. An experienced biological monitor shall oversee the construction of the barrier fence and be on-site to search for and remove FTHLs during surface-disturbing activities.
7. Biological monitors shall conduct a removal survey, following the protocol below, only after the fence construction is completed.

Specifications of the *Flat-Tailed Horned Lizard Rangeland Management Strategy* fencing and removal program, designed for very large projects containing roads, also include permanent lizard-proof fencing. This is not necessary or advisable for this Project. Upon completion of the Project, the area would still support open ground (beneath the solar collectors) and the lizard species of concern could still potentially forage in these areas,

particularly if native ants are present. The proposed 8-foot high permanent chain link fencing would allow the movement of these small reptiles across the Project area and into open habitat adjacent. The Project includes a continuous strip of open space running from north-to-south (Figure 16). Removing the lizard-proof fencing after project construction would allow any animals utilizing the open space to move north or south, on or off the property, as well as into the areas of the panels. The permanent lizard-proof fence was incorporated into general design conditions for very large projects to prevent, or at least minimize, lizard kills from vehicle and general equipment travel on a site. This Project is an unmanned facility, with infrequent vehicle travel. As such, the benefit of allowing access by small fauna, including the lizards, would outweigh the risks of animals being struck by vehicles.

Removal Survey Protocol

Removal surveys shall be conducted after barrier fence completion and prior to construction activities. Surveys shall follow these guidelines:

1. Surveys shall be conducted by experienced biological monitors (specified in Appendix 6 of the plan).
2. Surveys shall occur only during appropriate survey conditions as described in Appendix 6 of the plan (generally April - September under optimal temperature conditions, etc.).
3. For larger Projects (such as the Project), minimum survey effort shall be 0.5 hour per acre, unless otherwise required by the lead agency (e.g., County of San Diego).
4. Survey methods shall be designed to achieve a maximal capture rate and shall include but not be limited to the following: strip transects, tracking, and raking around shrubs.
5. Survey methods shall incorporate a systematic component to ensure that the entire fenced Project site is surveyed. A modification of the Population Monitoring Protocol (Appendix 7 of the plan) may be used.

The Project has incorporated mitigation measures to avoid and/or minimize indirect impacts to adjacent habitats (see Chapter 4.4), and thus would allow these areas to continue to support habitats for sensitive species occurring in the Project's vicinity.

Mitigation for the potential loss of habitat for these species on the project site will be accomplished by the acquisition of habitat at a 2:1 ratio, as discussed in Section 4.4, Sensitive Habitats. The Colorado Desert fringe-toed lizard was observed on the project site. The flat-tail horned lizard was not, but presence was inferred per the USFWS protocol. Lands to be considered for acquisition as mitigation should also show the characteristics called for by the USFWS protocol.

Thirteen entities [Anza-Borrego State Park, California State Parks (Ocotillo Wells), California Department of Fish and Game, Arizona Game & Fish Department, USFWS (Carlsbad, Phoenix), US Bureau of Reclamation (Yuma), US Bureau of Land Management (El Centro, Palm Springs, Yuma), US Marine Corps Air Station (Yuma), US Naval Air Facility (El Centro), and US Navy SW Division (San Diego)] participated in the preparation of the *Flat-tailed Horned Lizard Rangewide Management Strategy* cited above. Inherent to that Management Strategy was the creation of five Management Areas. One of these five Management Areas is the Borrego Badlands. Based on the goals of these entities efforts, available lands near or within this Management Area should be strongly considered as candidates for mitigation lands.

B. Design considerations

The primary design consideration adopted was a reduction of the original project site. The original site included an approximately 50- acre area of dunes in its southern portion. The dunes areas are composed of the fine sand habitats utilized by both sensitive lizard species, and potentially supporting Gander's cryptantha. Most of the dune acreage was eliminated from the project site, and the portion of this southern dunes habitat still within the project site has been avoided with the grading now proposed (Figures 15 and 16).

The following measures have been incorporated into the Project design to avoid or minimize indirect impacts to adjacent habitats, particularly those to the north and east where adjacent lands are undeveloped and allow for wildlife movement.

Drainage. Existing drainage patterns are proposed to be retained, with no new channels created. It is anticipated that washing the panels would be done 0-2 times per year. Washing of panels would be done over an approximately four-week period, not all at once, and the water would be expected to percolate/evaporate. Water will be used to wash the panels; this will be done 0-2 times per year. The Project would use approximately 2.5 acre-feet of domestic water. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project's contribution to cumulative impacts to groundwater resources. This amount of water approximates a rainfall event of less than 0.1 inch. The washing of the panels would be done over a three to four week period, and over a total of over 300 acres. This amount of water over this amount of area over this period of time would not be expected to cause adverse impacts. Should a weed problem develop around the panels, the Project would instigate a weed control program, either mechanical or spray-based or a combination, following consultation with the County of San Diego.

Lighting. All outdoor lighting shall be limited in compliance with the San Diego County Light Pollution Code (Sections 59.101-59.115) and shielded and directed away from adjacent habitat areas. Low-pressure sodium lighting shall be used for security lights, provided this meets requirements for human health and safety. Infrared cameras and motion detectors are also proposed for use.

Noise. Construction noise shall be limited to those periods designated per the San Diego County Noise Ordinance (Sections 36.401 et. seq). No clearing, grubbing, or grading shall be conducted during the breeding season of the loggerhead shrike (March-August), unless a preconstruction survey determines that no nesting shrikes are in the Project area. Operational noise would not be expected to be a factor. Activity at the site would be limited to one visit per week and washing of panels would be done up to 2 times per year. No mechanical generators or other types of noise-generating equipment would be required.

Invasive Species. No landscaping is proposed, although the Project would be required to conduct weed abatement and keeping the site in good condition for visual purposes. Internally, the Project would have a combination of gravel areas and dirt roads.

Barriers. Due to the nature of the Project, human and domestic pet intrusion would not be expected to be a factor affecting off-site habitat to the north and east. The Project is proposing to surround the area with chain link fencing and barbed wire totaling eight feet in height.

3.5 Conclusions

Direct impacts to the FTHL would be lessened to below a level of significance with implementation of off site mitigation and the protocol program of fencing and removal of individuals prior to construction. This protocol program would also include the CDFTL, which is active at the same time, and would lessen direct impacts to this lizard species to below a level of significance.

Direct impacts to nesting of the loggerhead shrike would be lessened to below a level of significance with seasonal construction constraints. Should construction be proposed at this time, a survey to determine if nesting shrikes are present would be done.

Impacts to foraging habitat for Swainson's hawk and loggerhead shrike would be lessened to below a level of significance with the acquisition of native habitats within or near the study area. Mitigation land will be acquired at a 2:1 ratio; mitigation for habitat loss is discussed in Section 4.4 and 4.5.

Species-specific mitigation is required for Gander's cryptantha, a County Group A species. One individual plant was found on the Project site, on Parcel A. Therefore, mitigation land acquired must include at least two individuals of Gander's cryptantha (2:1 ratio). One group of three individuals was found on the Northern Transmission Corridor. If the Northern Transmission Corridor is utilized, mitigation land must include an additional six individuals, for a total of at least eight individuals.

Mitigation to support regional long-term survival of all of these sensitive species would be done through the acquisition and preservation of native habitats. Mitigation lands will be selected with the input of the County of San Diego and Anza-Borrego State Park. It has been determined that this input will be given following these agencies' review of this Biological Resources Report. Accordingly, the specific mitigation parcel(s) cannot be evaluated at this time, as they have not yet been selected.

The following species-specific criteria for selection of mitigation lands should be considered:

- Flat-tailed horned lizard. As discussed in Section 3.4, thirteen state and federal entities have developed a strategy for long-term preservation of the FTHL. One of the tenets of the strategy is the creation and implementation of five Management Areas in Arizona and California. One of these is in the Borrego Badlands, within five miles of the Project site. Selection of mitigation lands should consider suitable parcels within, adjacent, or near the Borrego Badlands Management Area.

If no records of FTHL exist for otherwise desirable potential mitigation land (no records of FTHL exist for the project site and no FTHL were found on the protocol surveys), the protocol evaluation used to determine the project site should be assumed to support FTHL should be implemented. This approach would also support Colorado Desert fringe-toed lizard long-term regional survival, as it occupies much of the same habitats.

- Loggerhead shrike and Swainson's hawk. Acquisition and preservation of foraging habitat would support long-term regional survival for these two bird species.
- Gander's cryptantha. Acquisition and preservation of habitat would support long-term regional survival for this species. While its requirements are not well-known, both locations on the Project area were in sand substrate, and at least one historical record (Reiser, 1994) noted it in the sand dune area east of the Airport. It apparently is not limited to this substrate, but does utilize it. Acquisition of habitat would also support the long-term regional survival of ribbed cryptantha.

Acquisition and preservation of habitats would support long-term regional survival for other sensitive species in the region, including but not limited to burrowing owls, badgers, and turkey vultures. These habitats also support the more common species that comprise most of the biota of the region.

The following general criteria for selection of mitigation lands should be considered:

- Proximity to the Park. Anza-Borrego State Park includes 600,000 acres. Lands that are inholdings or adjacent or near the park would have a higher biological

value than similar lands that are distant. Such lands are a part of the overall system of habitats of the park, as opposed to more isolated pieces. Edge effects are eliminated or greatly reduced with inholdings, adjacent lands, or lands in close proximity.

- Sand substrate. While the FTHL and CDFTL are not limited to fine sand substrate, it is the optimal habitat for these species. It is also the substrate for Gander's cryptantha on the Project site, and on the site adjacent to the east end of the Airport.

While the Project could potentially impact sensitive species, the aforementioned mitigation measures would fully offset these adverse effects. Potential significant impacts are therefore less than significant with the proposed mitigation.

4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

4.1 Guidelines for the Determination of Significance

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS? Any of the following conditions would be considered significant:

- A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the Project site.
- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by the ACOE, CDFG, and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse changes in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- C. The Project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.
- D. The Project would increase human access or competition from domestic animals, pests, or exotic species to levels proven to adversely affect sensitive habitats.
- E. The Project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

4.2 Analysis of Project Effects

- A. The Project would not result in the loss of any riparian habitat. Both desert saltbush scrub and desert dunes (in the Project's case, stabilized and partially stabilized desert dunes) are considered sensitive habitat types. Impacts to these habitats would be considered significant, requiring mitigation at a 2:1 ratio.
- B. Impacts would occur to the ephemeral drainage segments on the Southern Transmission Corridor with the proposed grading and/or clearing. Those ephemeral segments may be jurisdictional under the California Department of Fish and Game.
- C. A photovoltaic system, as proposed here, generates electricity directly from incident sunlight, as contrasted to solar thermal systems, which use incident sunlight to heat water to produce steam to drive generation of electricity. Photovoltaic systems do not require large amounts of water. Water will be used to

wash the panels; this will be done 0-2 times per year. The project would use approximately 2.5 acre-feet of domestic water. The applicant has agreed to implement groundwater use reduction measures of at least 2.5 acre-feet of groundwater per year to mitigate the Project's contribution to cumulative impacts to groundwater resources.

- D. As discussed in Section 3.4, the Project would not increase human access or competition from domestic animals, pests, or exotic species to levels proven to adversely affect any sensitive habitats. Measures have been incorporated to discourage intrusion into the habitat outside the Project area by use of appropriate fencing and barriers.
- E. There are no existing wetlands on-site and thus no wetland buffers are required.

4.3 Cumulative Impact Analysis

The study area defined for this project is the area of Borrego Springs. This covers approximately 27,000 acres, including currently developed commercial, industrial, residential, airport facilities, and agricultural lands. This study area was developed with County staff as discussed in Section 3.3. Thirteen projects were used for cumulative analysis, and these are also listed in Section 3.3. Habitat types and impacted acreages are given in Table 3.

Two native habitat types are present on the Project site – Desert saltbush scrub and Stabilized and partially stabilized desert dunes. Loss of 326.79 acres of Desert saltbush scrub (including off-site impacts) represents approximately 60 percent of the cumulative projects total of this habitat (Table 3). As such the Project would make a cumulatively considerable contribution to impacts to this habitat.

All of the Stabilized and partially stabilized desert dunes habitat included in the cumulative projects' impacts is on this Project site. This is the Holland habitat type which most closely approximates the on-site condition, but this code is not recognized in Oberbauer's revised Holland/County codes, and may not have been considered in the habitat mapping of the other properties. Since the amount of this habitat to be potentially impacted by construction of the Northern Transmission Corridor is small – 0.07 acre -- and since an isolated transmission corridor such as this would be expected to revegetate, the Project would not make a cumulatively considerable contribution to impacts to this habitat.

4.4 Mitigation Measures and Design Considerations

Mitigation for the loss of 326.79 acres of desert saltbush scrub and 0.07 acre of stabilized and partially stabilized dunes would be required at a 2:1 ratio (per the County's

Guidelines for Determining Significance, Table 5, for habitat types outside the approved MSCP plans).

A. Mitigation

At the present time, the Project is proposing to fully mitigate its impacts at a 2:1 ratio (653.72 acres) via one of five mitigation alternatives:

1. Fund the transfer of inholdings or lands adjacent the Anza Borrego State Park from Anza Borrego Foundation (ABF) to the state park. Transferred lands must contain specified habitat or like function habitat.
2. Purchase of inholdings or lands adjacent the park directly by Euris and then transferred directly to the state parks or other government agency charged with conservation of natural resources. Evidence of satisfaction must include a copy of the contract with the agency, and a written statement from the agency that (1) the land contains the specified acreage and the specified habitat, or like functioning habitat, and (2) the land will be managed by the agency for conservation of natural resources in perpetuity.
3. Purchase of inholdings directly by Euris and then the inholdings would be transferred to County Parks and Recreation Department to temporarily manage the land before transferring the land to state parks. A short term resource management plan (RMP) would be established to the satisfaction of the Director of Planning and Land Use and Parks and Recreation.
4. Find and purchase appropriate habitat land (approved by the lead agency) and establish a Resource management plan (RMP). This would require evidence that the land is dedicated in a conservation open space easement and a Resource Manager is established and an endowment to ensure funding of annual ongoing basic stewardship costs shall be complete prior to the approval of the RMP.
5. Purchase habitat credit from County Parks and Recreation Department. Sufficient habitat does not exist on County mitigation properties therefore this option would be in combination with one of the first four options.

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Table 3. Acreage of Cumulative Project Impacts (Open Projects)

Habitat Type	Project Name														TOTAL
	1a-1d. Borrego Country Club	2a-2b. Borrego Springs Senior Condominiums	3. Desert Diamond	4. Bowen/ Jonas	5a-5b. Borrego Sand and Rock Borrow Pit	6a-6b. Borrego 50	7a-7b. Borrego Country Club Estates	8. Miller	9a-9g. Yaqui Pass	10. Rainshadow	11a-11b. Borrego 138 Inland Land Development	12. Friestedt	13. Henderson Canyon	Project	
Sonoran Creosote Scrub	95.00	9.72	8.50	39.08		46.46	210.62	20.30	32.72	9.80		3.99	1.10		477.29
Desert saltbush scrub	104.80				0.10						110.00			326.79	541.69
Stabilized and partially stabilized desert dunes														0.07	0.07
Sonoran Desert Scrub													2.30		2.30
Sonoran mixed woody scrub					32.20										32.20
Sonoran mixed woody and succulent scrub													26.60		26.60
Non-native grassland			10.92					1.00							11.92
Non-native vegetation	17.00														17.00
TOTAL	216.80	9.72	19.42	39.08	32.30	46.46	210.62	21.30	32.72	9.80	110.00	3.99	30.00	326.86	1109.07

When the final mitigation plan/location is determined by DPLU, County Parks, and the ABF, a separate Mitigation Plan document shall be submitted to the County as a supplement to this Biological Resources Report.

As shown in Table 4 and Figure 17, 32 parcels were identified that are presently owned by Anza Borrego Foundation totaling 1257.50 acres. SANGIS mapping was reviewed to determine habitat types occurring on these parcels. Based on this information, approximately 309.9 acres of desert saltbush scrub or other habitats of equal value occur. It is possible that some of the other parcels mapped as lower “value” habitat (e.g., creosote bush scrub) or additional privately owned lands could provide like-functioning habitat for sensitive species such as the FTHL, CDFTL, and shrike as well as other sensitive avian and plant species.

B. Design considerations

The primary design consideration adopted was a reduction of the original project site on the original Parcel B. The original site included an approximately 50-acre area of dunes in its southern portion. The dunes areas are composed of the fine sand habitats utilized by both sensitive lizard species, and potentially supporting a sensitive plant species. Most of the dune acreage was eliminated from the project site, and the portion of this southern dunes habitat still within the project site has been avoided with the grading now proposed (Figures 15 and 16).

4.5 Conclusions

Significant impacts associated with impacts to sensitive habitats would be fully mitigated by the Project.

Table 4. Potential Mitigation Parcels

Township/Range/ Section	Parcel #	Total Area	Type of Vegetation	Percentage of Total Area ¹	Mitigation Ratio
T10SR7E Section 20	142-140-03	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-04	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-05	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-06	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-07	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-08	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-09	40	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-17	5	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-18	35	Sonoran Creosote Bush Scrub	100%	1:1
	142-140-19	40	Sonoran Creosote Bush Scrub	100%	1:1
T10SR7E Section 21	142-150-32	10	Sonoran Creosote Bush Scrub	100%	1:1
	142-150-33	10	Sonoran Creosote Bush Scrub	100%	1:1

Township/Range/ Section	Parcel #	Total Area	Type of Vegetation	Percentage of Total Area	Mitigation Ratio
T10SR7E Section 33	142-230-25	10	Badlands/Mudhill Forbs	90% (9 acres)	3:1
			Sonoran Wash Scrub	10%	1:1
T10SR7E Section 10	142-080-04	40	Desert Saltbush Scrub	60% (24 acres)	2:1
			Sonoran Wash Scrub	38%	1:1
			Sonoran Creosote Bush Scrub	2%	1:1
T9SR6E Section 36	119-120-04	75	Desert Saltbush Scrub	50% (37.5 acres)	2:1
			Desert Sink Scrub	30% (22.5 acres)	3:1
			Sonoran Creosote Bush Scrub	15%	1:1
			Sonoran Wash Scrub	5%	1:1
	119-120-26	2.5	Sonoran Wash Scrub	100%	1:1
	119-120-34	10	Sonoran Wash Scrub	95%	1:1
			Sonoran Creosote Bush Scrub	5%	1:1
T11SR6E Section 8	201-050-15	90	Desert Saltbush Scrub	95% (85.5 acres)	2:1
			Stabilized and Partially-Stabilized Desert Sand Field	5% (4.5 acres)	2:1

Township/Range/ Section	Parcel #	Total Area	Type of Vegetation	Percentage of Total Area	Mitigation Ratio
T11SR6E Section 9	201-060-06-02	180	Sonoran Creosote Bush Scrub	98%	1:1
			Badlands/Mudhill Forbs	2% (3.6 acres)	3:1
T11SR6E Section 11	201-080-04	10	Sonoran Creosote Bush Scrub	100%	1:1
	201-080-67	10	Sonoran Creosote Bush Scrub	100%	1:1
T11SR7E Section 16	201-120-24	20	Sonoran Creosote Bush Scrub	99%	1:1
			Desert Dry Wash Woodland	1% (0.2 acre)	3:1
T11SR7E Section 15	201-120-13	40	Sonoran Creosote Bush Scrub	90%	1:1
			Desert Dry Wash Woodland	10% (4 acres)	3:1
T11SR7E Section 23	201-170-18	80	Encelia Scrub	88% (70.4 acres)	2:1
			Sonoran Creosote Bush Scrub	8%	1:1
			Desert Dry Wash Woodland	4% (3.2 acres)	3:1
T11SR7E Section 27	201-220-02	240	Sonoran Creosote Bush Scrub	90%	1:1
			Sonoran Wash Scrub	5%	1:1
			Desert Dry Wash Woodland	5% (12 acres)	3:1

Township/Range/ Section	Parcel #	Total Area	Type of Vegetation	Percentage of Total Area	Mitigation Ratio
T11SR7E Section 27 (continued)	252-051-24	10	Encelia Scrub	50% (5 acres)	2:1
			Sonoran Creosote Bush Scrub	50%	1:1
T12SR7E Section 15	252-080-87	10	Sonoran Creosote Bush Scrub	85%	1:1
			Desert Dry Wash Woodland	15% (1.5 acres)	3:1
	252-080-88	10	Desert Dry Wash Woodland	100% (10 acres)	3:1
	252-080-70	10	Desert Dry Wash Woodland	100% (10 acres)	3:1
	252-080-53	10	Desert Dry Wash Woodland	70% (7 acres)	3:1
			Sonoran Creosote Bush Scrub	30%	1:1
T12SR7E Section 13	252-090-54	10	Sonoran Creosote Bush Scrub	100%	1:1
	252-090-61	10	Sonoran Creosote Bush Scrub	100%	1:1
SUMMARY	TOTAL ACREAGE	1257.5	TOTAL MITIGATION ACREAGE AT 2:1 OR 3:1 RATIO	309.9	

¹ Estimates are based on SANGIS mapping. More precise measurements would be done with on-the-ground surveys.

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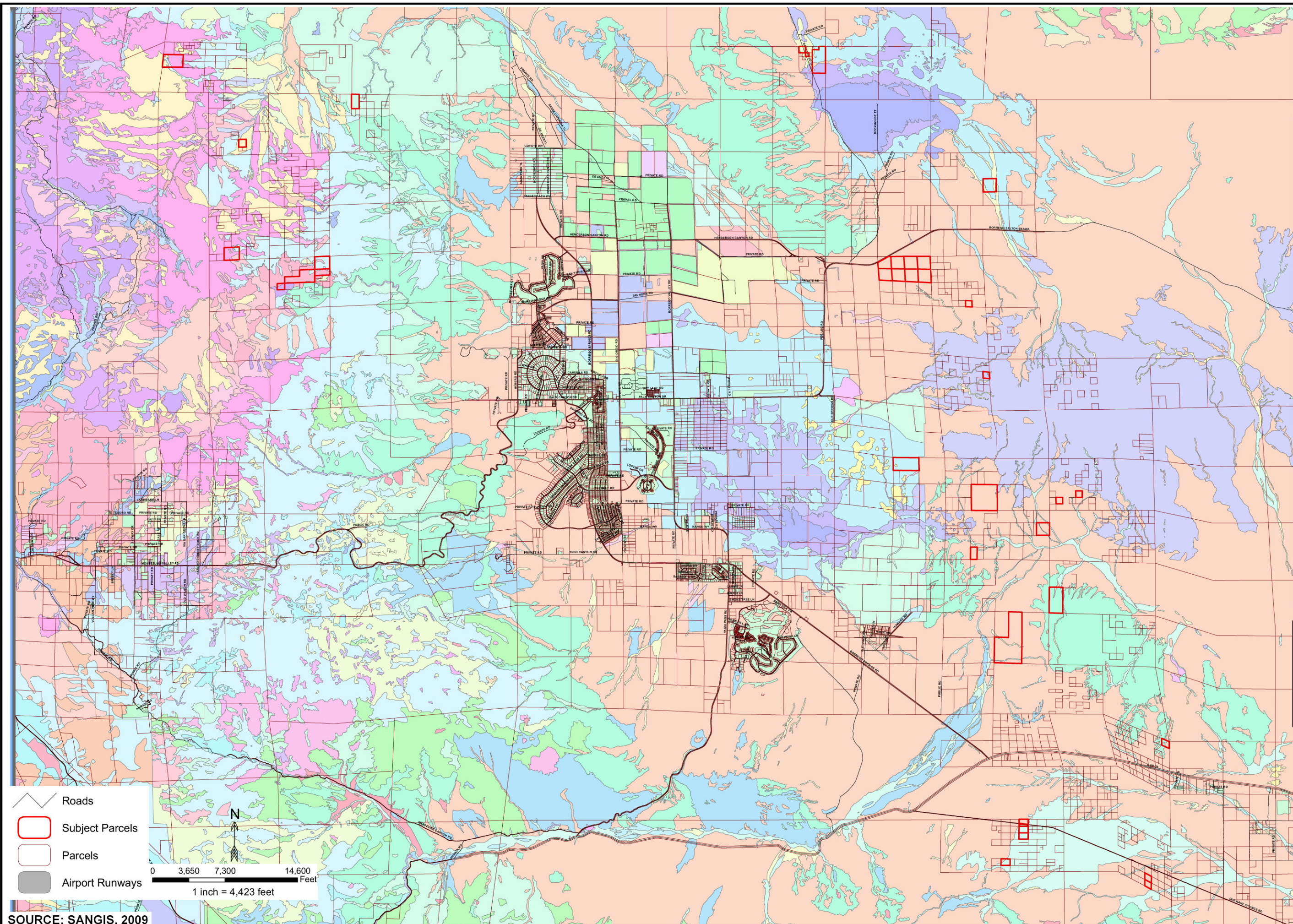


FIGURE 17

POTENTIAL MITIGATION PARCELS

Affinis
 Shadow Valley Center
 847 Jamacha Road
 El Cajon, CA 92019

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 Guidelines for the Determination of Significance

Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

5.2 Analysis of Project Effects

There are no federally protected wetlands or waterways as defined by Section 404 of the Clean Water Act on site. There are two ephemeral stream segments (erosional features) on the Southern Transmission Corridor. These segments would be under the jurisdiction of the California Department of Fish and Game. The jurisdictional area of these segments totals approximately 0.01 acre. The Project proposes to place fill (alter) these segments, and would therefore be required to complete and submit to CDFG a Notification of Lake or Streambed Alteration Packet. Upon review of that Packet, CDFG would determine if a Streambed Alteration Agreement would be required.

A Jurisdictional Waters Study is included with this report as Appendix 9.

5.3 Cumulative Impact Analysis

There are no federally protected wetlands as defined by Section 404 of the Clean Water Act on site.

There are two ephemeral stream segments, erosional features, and these segments would be under the jurisdiction of the California Department of Fish and Game. The jurisdictional area of these segments totals approximately 0.01 acre. Fill of these segments would contribute to cumulative impacts in the area.

5.4 Mitigation Measures and Design Considerations

There are no federally protected wetlands as defined by Section 404 of the Clean Water Act on site. There are two ephemeral stream segments, erosional features, and these segments would be under the jurisdiction of the California Department of Fish and Game. Mitigation for impacts to these segments would be determined with the Department during its review of the required Notification of Lake or Streambed Alteration Packet .

5.5 Conclusions

No significant impacts would occur.

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6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 Guidelines for the Determination of Significance

Would the Project interfere substantially with the movement of any native resident migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? Any of the following conditions would be considered significant:

- A. The Project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The Project would substantially interfere with a local or regional wildlife corridor or linkage.
- C. The Project would create artificial wildlife corridors that do not follow natural movement patterns.
- D. The Project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
- E. The Project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
- F. The Project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkages.

6.2 Analysis of Project Effects

The Project is not expected to interfere substantially with the movement of any native resident migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- A. The Project would not prevent wildlife access to areas critical to reproduction. The Project would remove habitat, largely saltbush scrub, that is used for foraging by small, resident fauna (kangaroo rats, black-tailed jackrabbits) and by raptors. No specialized essential breeding habitat is present, and no water sources are present.
- B. The Project site is bounded on the south by the airport, whose property is surrounded by a chain link fence, and bounded on the west by an agricultural operation and a sand-and-gravel operation. These existing facilities preclude wildlife corridors moving to the west and south through the site. The existing wildlife corridors exist on the habitats to the north and east of the Project site (Figure 6), away from the development and Palm Canyon Road.
- C. The Project would not create artificial corridors. No specific corridors exist at this time – whatever wildlife movement across the property does occur is through generally homogeneous saltbush scrub habitat. There is nothing in Project design that would result in the creation of a funneling of any wildlife movement.
- D. The Project is a proposed field of solar collectors, and is not a noise generator. As discussed in Chapter 3.4, the Project proposes minimal, low sodium lighting which would be directed into the Project.
- E. The property does not presently have a distinct wildlife corridor. The airport is south of the bulk of the property, and an agricultural area is immediately to the west. Both of these facilities have existing fences along their boundary with the Project area, so any existing wildlife movement on or off the property is limited to the east and to the north.
- F. Because of the constraints to the west and south, there are no wildlife corridors across the property. Visual continuity along a corridor is not inherent to the property.

6.3 Cumulative Impact Analysis

The Project would not contribute to cumulative impacts related to wildlife movement or nursery sites.

6.4 Mitigation Measures and Design Considerations

As design features have been incorporated into the Project to avoid and/or minimize impacts, no further mitigation measures are required.

6.5 Conclusions

The Project would not result in significant impacts related to wildlife movement or nursery sites.

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7.0 LOCAL POLICIES, ORDINANCES, ADOPTED PLANS

7.1 Guidelines for the Determination of Significance

Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? Any of the following conditions would be considered significant:

- A. For lands outside the MSCP, the Project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.
- B. The Project would preclude or prevent the preparation of the subregional NCCP.
- C. The Project would impact any amount of sensitive habitat lands as outlined in the RPO.
- D. The Project would not minimize and/or mitigate CSS habitat loss in accordance with Section 4.3 of the NCCP Guidelines.
- E. The Project does not conform to the goals and requirements as outlined in any applicable HCP, HMP, SAMP, Watershed Plan, or similar regional planning effort.
- F. For lands within the MSCP, the Project would not minimize impacts to BRCAs, as defined in the BMO.
- G. The Project would preclude connectivity between areas of high habitat values, as defined by the NCCP guidelines.
- H. The Project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.
- I. The Project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The Project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The Project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
- L. The Project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

7.2 Analysis of Project Effects

The Project is not expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

- A. The Project would not impact coastal sage scrub habitat.
- B. It would not preclude or prevent the preparation of the regional NCCP.
- C. The Project would impact sensitive lands per the County's RPO (e.g., desert saltbush scrub and stabilized/partially stabilized sand dunes), but this impact would be fully mitigated by acquisition of off-site habitat.
- D. The Project does not impact coastal sage scrub and therefore is not subject to Section 4.3 of the NCCP Guidelines.
- E. There are no HCPs, HMPs, SAMPs, Watershed Plans, or similar regional planning efforts applicable to this Project.
- F. The Project is not within the MSCP and thus it would not impact any BRCAs or lands within the regional NCCP/MSCP.
- G. The connectivity between and among habitats, and associated wildlife movement corridors, exists north and east of the Project area, as there is agricultural and other development immediately to the west of the Project area, and the airport is south of the Project area.
- H. Please see item G above.
- I. The Project area does not impact any MSCP narrow endemic species.
- J. It would not be expected to reduce the likelihood of survival and recovery of listed species, result in the loss of avifauna covered by the Migratory Bird Treaty Act, nor violate the Bald Eagle Protection Act.
- K. Please see item J above.
- L. Please see item J above.

7.3 Cumulative Impact Analysis

The Project would not result in incremental impacts related to local policies, ordinances, or adopted plans.

7.4 Mitigation Measures and Design Considerations

No mitigation measures are required.

7.5 Conclusions

The Project is consistent with local policies, ordinances, and adopted plans.

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8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

Sensitive Species. Potential impacts to nesting by the loggerhead shrike would be mitigated by disallowing grubbing and grading during the breeding season (March - August). Impacts to sensitive reptile species would be avoided by implementation of a fencing and capture plan in accordance with the Flat-Tailed Horned Lizard Rangeland Management Strategy. Impacts to Gander's cryptantha would be mitigated by acquisition of habitat containing at least twice as many individuals as would be impacted.

Riparian Habitat or Sensitive Natural Community. No riparian habitat would be impacted. The Project would result in the loss of 326.79 acres of desert saltbush scrub and 0.07 acres of stabilized and partially stabilized desert dunes, which are considered sensitive. These impacts would be fully mitigated by purchase of suitable off-site habitat at a 2:1 ratio (Table 5). Acquisition and management of suitable off-site habitat would contribute to the regional long-term survival of:

- Sensitive species found on the Project site.
- Sensitive and common species potentially occurring on the site or utilizing the site seasonally, but not observed.
- Other regional species not occurring on, or utilizing the site.

Jurisdictional Wetlands and Waterways. Two ephemeral stream segments on the Southern Transmission Corridor would be impacted. The California Department of Fish and Game may take jurisdiction on these ephemeral segments. Mitigation would be done with Notification of the Streambed Alteration Agreement Package.

Wildlife Movement and Nursery Sites. No regional wildlife corridors are present on the site. The site is bordered by the fenced Borrego Airport on the south, and by the agricultural Cocopah Nurseries and De Anza Materials on the west, which preclude ground movements to or from the south and west. No specific nursery sites are present on the Project site.

Local Policies, Ordinances, Adopted Plans. The project area is not within the MSCP and therefore would not preclude or prevent the preparation of the subregional NCCP. It would not impact any MSCP Narrow Endemic species. It would not be expected to reduce the likelihood of survival and recovery of any listed species, nor would it be expected to preclude connectivity between areas of high habitat values. There are no HCPs, HMPs, SAMPs, Watershed plans, or similar regional planning efforts applicable to the project.

As summarized in Tables 6 and 7, all adverse biological impacts would be mitigated to below a level of significance.

Table 5. Habitat/Vegetation Communities, Impacts, Mitigation

HABITAT TYPE	EXISTING ACRES	IMPACTS ACRES	OFF-SITE IMPACTS (ACRES)	MITIGATION RATIO	MITIGATION REQUIRED (ACRES)	ACRES PRESERVED ON-SITE	OFF-SITE MITIGATION REQUIRED
Desert saltbush scrub (36110)	337.91	321.44	5.35	2:1	653.58	16.47	653.58 ¹
Stabilized and partially stabilized desert dunes (22200)	2.93	0.00	0.07	2:1	0.14	2.93	0.14 ²
Disturbed habitat (11300)	0.00	0.00	0.96	0:1	0.00	0.00	0.00
TOTAL	340.84	321.44	6.38		653.72	19.40	653.72

¹ Under conditions of MUP 09-012: 536.88 acres. Under conditions of MUP 09-014: 106.0 acres. Under CEQA document conditions: 10.7 acres.

² Under CEQA document conditions: 0.14 acre.

Table 6. Summary of Project Mitigation Measures

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER(S)
Off-site habitat acquisition at 2:1 (To be determined and provided in a separate Mitigation Report)	Not significant	4.1 (A), 3.1 (B), 3.1 (C), 3.1 (F)
Lizard removal program and installation of barrier fencing prior to construction as outlined in the <i>Flat-tailed Horned Lizard Rangewide Management Strategy</i>	Not significant	3.1 (B)
Acquisition of habitat containing at least twice as many individuals of Gander's cryptantha as would be impacted	Not significant	3.4.1
Maintain existing overall drainage pattern, as shown in grading plans (Figure 15)	Not significant	4.1 (B)
Comply with light pollution code	Not significant	3.1 (G)
Avoid grading/grubbing during breeding season (noise)	Not significant	3.1 (G & J)
Weed abatement	Not significant	4.1 (D)
Preconstruction surveys	Not significant	3.1 (J)
Submittal of Notification of Streambed Alteration to CDFG and obtain permit as required by CDFG	Not significant	4.1 (B)
Fencing and temporary fencing details	Not significant	3.1 (B)

Table 7. Habitat Mitigation Requirement by Project Component

Project Component	Resource Type Impacted	Amount Impacted	Mitigation Required (2:1 ratio)	Agency Responsible for Mitigation Enforcement
Parcel A (MUP 09-012)	Desert saltbush scrub (36110)	268.44 acres	536.88 acres	County of San Diego
	Gander's cryptantha	One individual	Habitat supporting two individuals	
Parcel B (MUP 09-014)	Desert saltbush scrub	53.0 acres	106.0 acres	County of San Diego
Northern Transmission Corridor	Desert saltbush scrub	2.35 acres	4.70 acres	CA Public Utilities Commission (CPUC)
	Stabilized and partially stabilized desert dunes (22200)	0.07 acre	0.14 acres	
	Gander's cryptantha	Three individuals	Habitat supporting six individuals	
Southern Transmission Corridor	Desert saltbush scrub	2.0 acres	4.0 acres	CPUC
SDG&E Substation Expansion	Desert saltbush scrub	1.0 acre	2.0 acres	CPUC

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10.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

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Juan Jasso Land Use Technician, DPLU	Assistance with file review of Projects for cumulative analysis
Monica Bilodeau Biologist	File review of projects for cumulative analysis and Lead Agency reviewer

APPENDICES 1-7

DICOTYLEDONES

AMARANTHACEAE - Amaranth Family

Atriplex polycarpa (Torrey) S. Watson
Saltbush

**Salsola tragus* L.
Russian Thistle

ASTERACEAE - Sunflower Family

Chaenactis stevioides Hook. & Arn.
Desert pincushion

**Cichorium intybus* L.
Chicory

Eriophyllum multicaule (DC.) Gray
Many-Stem Woolly Daisy

Geraea canescens A. Gray
Desert sunflower

Malacothrix glabrata A. Gray
Desert Dandelion

BORAGINACEAE - Borage Family

Cryptantha angustifolia (Torrey) E. Greene
Narrowleaf cryptantha

Cryptantha ganderi I.M. Johnston
Gander's cryptantha

Pectocarya recurvata I.M. Johnston
Comb Bur

BRASSICACEAE - Mustard Family

**Brassica* sp.
Mustard

**Brassica tournefortii* Gouan
Mustard

Dithreya californica Harrey
Spectacle Pod

**Lepidium* sp.
Peppergrass

Appendix 1. Continued

CHENOPODIACEAE - Goosefoot Family

~~*Sarcobatus vermiculatus* (Hook.) Torrey~~ *Suaeda nigra*
Greasewood Suaeda

FABACEAE - Pea Family

Prosopis glandulosa Torr. var. *torreyana* (L. Benson) M.C Jtn
Honey Mesquite

LOASACEAE - Loasa Family

Mentzelia affinis Greene
Yellow Comet

MALVACEAE - Mallow Family

**Malva neglecta*
Common Mallow

NYCTAGINACEAE - Four O'Clock Family

Abronia villosa S. Watson
Sand Verbena

ONAGRACEAE - Evening Primrose Family

Camissonia sp.
Sun Cup

Camissonia claviformis (Torrey & Fremont)
Brown-Eyed Evening Primrose

Oenothera deltoides Torrey & Fremont
Basket Evening Primrose

POLYGONACEAE - Buckwheat Family

Erigonum thomasi Torrey
Thomas' Buckwheat

VISCACEAE - Mistletoe Family

Phoradendron californicum Nutt.)
Desert mistletoe

Appendix 1. Continued

ZYGOPHYLLACEAE - Caltrop Family

Larrea tridentata (DC.) Cov.
Creosote Bush

MONOCOTYLEDONES

LILIACEAE - Lily Family

Hesperocallis undulata A. Gray
Desert Lily

POACEAE - Grass Family

**Schismus barbatus* (L.) Thell.
Mediterranean Grass

KEY:

* = Non-native taxa

Nomenclature is according to Baldwin et. Al (2002), and Beauchamp (1986)

¹ Additional species observed in 2010

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Appendix 2. Wildlife Species Observed, Parcel A, April 2009

Birds:

Gambel's Quail
Mourning Dove
American Kestrel
Common Raven
Loggerhead Shrike*
Northern Mockingbird
American Pipit
Horned Lark
Western Meadowlark
Verdin
House Finch
White-crowned Sparrow

Mammals:

Coyote (*Canis latrans*)
Black-tailed Jackrabbit (*Lepus californicus*)
Desert Kangaroo Rat (*Dipodomys deserti*)
Merriam's Kangaroo Rat (*Dipodomys merriami*)

Reptiles:

Side-blotched lizard (*Uta stansburiana*)
Western Whiptail (*Aspidoscelis tigris*)
Colorado Desert Fringe-Toed Lizard (*Uma notata notata*)**

Butterflies:

Painted Lady (*Vanessa cardui*)
Checkered White (*Pontia protodice*)
Orange Sulphur (*Colias eurytheme*)
Mojave Sootywing (*Hesperopsis libya*)
Western Pygmy-Blue (*Brephidium exilis*)

*California Bird Species of Special Concern

**Colorado Desert Fringe-Toed Lizard (*Uma notata notata*)

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DICOTYLEDONES

AMARANTHACEAE - Amaranth Family

Atriplex polycarpa (Torrey) S. Watson
Saltbush

**Salsola tragus* L.
Russian Thistle

ASTERACEAE - Sunflower Family

Bidens laevis (L.) Britton, Sterns & Pogg
Spanish needles

Chaenactis stevioides Hook. & Arn.
Desert pincushion

**Cichorium intybus* L.
Chicory

Eriophyllum multicaule (DC.) Gray
Many-Stem Woolly Daisy

Geraea canescens A. Gray
Desert sunflower

Malacothrix glabrata A. Gray
Desert Dandelion

BORAGINACEAE - Borage Family

Cryptantha angustifolia (Torrey) E. Greene
Narrowleaf cryptantha

Pectocarya recurvata I.M. Johnston
Comb Bur

BRASSICACEAE - Mustard Family

**Brassica* sp.
Mustard

**Brassica tournefortii* Gouan
Mustard

**Lepidium* sp.
Peppergrass

**Sisymbrium irio* L.
London Rocket

Appendix 3. Continued

Tropidocarpum gracile Hook.
Slender Dobie Pod

CHENOPODIACEAE - Goosefoot Family

Sarcobatus vermiculatus (Hook.) Torrey *Suaeda nigra*
Greasewood *Suaeda*

CRASSULACEAE - Stonecrop Family

Crassula connata (Ruiz Lopez & Paven) A. Berger
Pygmy-Weed

FABACEAE - Pea Family

Prosopis glandulosa Torr. var. *torreyana* (L. Benson) M.C Jtn
Honey Mesquite

LOASACEAE - Loasa Family

Mentzelia affinis Greene
Yellow Comet

MALVACEAE - Mallow Family

**Malva neglecta*
Common Mallow

NYCTAGINACEAE - Four O'Clock Family

Abronia villosa S. Watson
Sand Verbena

ONAGRACEAE - Evening Primrose Family

Camissonia sp.
Sun Cup

Camissonia claviformis (Torrey & Fremont)
Brown-Eyed Evening Primrose

Oenothera deltoides Torrey & Fremont
Basket Evening Primrose

Appendix 3. Continued

POLYGONACEAE - Buckwheat Family

Erigonum thomasi Torrey
Thomas' Buckwheat

VERONICACEAE OR PLANTAGINACEAE - Veronica or Plantain Family

Plantago sp.
Plantain

**Plantago ovata* Forsk
Wooly Plantain

VISCACEAE - Mistletoe Family

Phoradendron californicum Nutt.)
Desert mistletoe

ZYGOPHYLLACEAE - Caltrop Family

Larrea tridentata (DC) Cov.
Creosote Bush

MONOCOTYLEDONES

LILIACEAE - Lily Family

Hesperocallis undulata A. Gray
Desert Lily

POACEAE - Grass Family

**Bromus hordeaceus* L.
Soft Chess

**Schismus barbatus* (L.) Thell.
Mediterranean Grass

KEY:

* = Non-native taxa

Nomenclature is according to Baldwin et. al (2002), and Beauchamp (1986)

¹ Additional species observed in 2010

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Appendix 4. Wildlife Species Observed, Parcel B, April, 2009

Birds:

Gambel's Quail
Mourning Dove
American Kestrel
Common Raven
Loggerhead Shrike*
Northern Mockingbird
Black-tailed Gnatcatcher
Horned Lark
House Finch
White-crowned Sparrow

Mammals:

Coyote (*Canis latrans*)
Black-tailed Jackrabbit (*Lepus californicus*)
Desert Kangaroo Rat (*Dipodomys deserti*)
Merriam's Kangaroo Rat (*Dipodomys merriami*)
Colorado Desert Fringe-Toed Lizard (*Uma notata notata*)**

Reptiles:

Side-blotched lizard (*Uta stansburiana*)

Butterflies:

Painted Lady (*Vanessa cardui*)
Checkered White (*Pontia protodice*)
Orange Sulphur (*Colias eurytheme*)
Western Pygmy-Blue (*Brachydium exilis*)

*California Bird Species of Special Concern

**Federal Species of Special Concern, California Species of Concern, County Group 1 List

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APPENDIX 5. SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING ON-SITE

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	COMMENTS
<i>Astragalus crotalarie</i> (Benth.) Salton milk vetch	CNPS: 1-1-2, List 4 Fed: -- Cal: -- County List D	Desert, sandy areas, 60-250 m	January - April	Known from Borrego, San Felipe Creek, Carrizo Creek, other desert locations. Not observed on any of the properties.
<i>Astragalus insularis</i> Kell. var. <i>harwoodii</i> Munz & McBurn Harwood's milk vetch	CNPS: 2-2-1, List 2 Fed: -- Cal: -- County List B	Desert, sandy or gravelly soils, desert dunes east and base of mountains.	January-May	Vallecito and Carrizo Stage Stations, Palm Springs Not observed on any of the properties
<i>Astragalus lentiginous</i> Dougl. var. <i>borreganus</i> Jones	CNPS: 1-1-1, List 4 Fed: -- Cal: -- County List D	Desert dunes and sandy flats, 30-270 m	February - May	Known from Coyote Creek, Fonts Point Wash, Palo Verde Wash, Borrego, Santa Caterina Spring. Not observed on any of the properties.
<i>Astragalus magdalenae</i> Greene var. <i>peirsonii</i> (Munz & McBurn.) Barneby Peirson's milk-vetch	CNPS: 2-2-2 Fed: T Cal: E County List A	Desert dunes; 55-250 m	December - April	Known only from Algodones Dunes. Not observed on any of the properties.
<i>Ayena compacta</i> Rose California ayenia	CNPS: 2-1-1, List 1B Fed: -- Cal: -- County List B	Desert, dry, rocky canyons	March-April	Borrego Palm Canyon, Hellhole Canyon, Yaqui Well, Sentenac Canyon, Box Canyon, Potrero, Vallecito Canyon, Agua Caliente Hot Springs, Canebreak Canyon, Rockhouse Canyon, Alta Bisnaga Wash; Volcanic Hills; south of Lava Flow Wash. No suitable habitat on-site.
<i>Bursera microphylla</i> Elephant Tree	CNPS: 3-1-1, List 2 Fed: -- Cal: -- County List B	Rocky slopes, highly localized populations	Anytime	No suitable habitat on-site.
<i>Calliandra eriophylla</i> Benth. Fairyduster	CNPS: 2-1-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (sandy or rocky); 120-1500 m	Anytime; blooms Jan -Mar	Known from Borrego Springs area and elsewhere in local desert. Not observed on any of the properties.
<i>Carlwrightia arizonica</i> Gray Arizona carlwrightia	CNPS: 3-2-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (sandy, granitic alluvium); 285-430 m	March - May	Not observed on any of the properties.

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	COMMENTS
<i>Chaenactis carphoclinia</i> Gray var. <i>peirsonii</i> (Jeps) Munz Peirson's pincushion	CNPS: 2-1-3, List 1B Fed: -- Cal: -- County List A	Slopes and mesas, desert, below 330'	March - April	Known only from the eastern Santa Rosa mts. Not observed on any of the properties.
<i>Chamaesyce arizonica</i> (Engelm.) Arthur Arizona spurge	CNPS: 2-1-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (sandy); 50-300 m	March - April	Beauchamp reports only from Borrego Palm Canyon. Not observed on any of the properties.
<i>Chamaesyce platysperma</i> (Engelm.) Flat-seeded spurge	CNPS: 3-2-2, List 1B Fed: -- Cal: -- County List B	Desert dunes, Sonoran desert scrub (sandy), 60-100 m	Feb-September	Known from only 4 herbarium collections and a 1987 collection from Imperial County. Not observed on any of the properties.
<i>Colubrina californica</i> Jtn. Las Animas colubrine	CNPS: 2-1-1, List 2 Fed: -- Cal: -- County List B	Creosote bush scrub, high desert scrub.	Anytime; blooms April - June	No suitable habitat on-site.
<i>Cryptantha costata</i> Bdg. Ribbed cryptantha	CNPS: 1-1-2, List 4 Fed: -- Cal: -- County List D	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/sandy; 60-500 m	Feb – May	None found on Parcels A or B; approximately 5 individuals found on Northern Corridor
<i>Cryptantha ganderi</i> Jtn. Gander's cryptantha	CNPS: 3-3-2, List 1B Fed: -- Cal: -- County List A	Desert dunes, Sonoran desert scrub (sandy); 160-400 m	Feb – May	1 individual found on Parcel A; another found on Northern Transmission Corridor.
<i>Galium angustifolium</i> Nutt. ssp. <i>borregoense</i> Dempster	CNPS: 3-1-3, List 1B Fed: -- Cal: R County List A	Sonoran desert scrub (rocky); 350-1250 m	March	Palm Cyn, Hellhole Cyn. Not observed on any of the properties.
<i>Lepidium flavum</i> var. <i>felipense</i> C.L. Hitchc. Borrego Valley pepper-grass	CNPS: 3-2-3, List 1B Fed: -- Cal: -- County List A	Pinyon and juniper woodland, Sonoran desert scrub/sandy; 455-840 m	March - May	Known from San Felipe, Borrego Palm Canyon, Little Blair Valley. Not observed on any of the properties.
<i>Linanthus floribundus</i> (Gray) Munz ssp. <i>hallii</i> Mason Santa Rosa Mtns. linanthus	CNPS: 3-1-3, List 1B Fed: -- Cal: -- County List A	Sonoran desert scrub; 1000 - 2000 m	May – July	Known from Clark Dry Lake, Borrego Palm Cyn, Santa Rosa Mts. Not observed on any of the properties.

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	COMMENTS
<i>Lycium parishii</i> Gray Parish's desert-thorn	CNPS: 2-1-1, List 2 Fed: -- Cal: -- County List B	Coastal scrub, Sonoran desert scrub; 305-1000 m	Anytime; blooms March - April	Known from Mtn Palm Springs, Vallecito Stage Station. Not observed on any of the properties.
<i>Lyrocarpa coulteri</i> Hook. & Harv. var. <i>palmeri</i> (Wats) Coulter's lyrepod	CNPS: 1-1-1, List 4 Fed: -- Cal: -- County List D	Sonoran desert scrub (gravelly or rocky); 120-795 m	December - April	Known from Hellhole Cyn, Borrego Springs, Borrego Palm Cyn, San Felipe Wash, The Narrows, Yaqui Well, Agua Caliente, Hot Springs, Vallecito Stage Station, Canebrake Canyon. Not observed on any of the properties.
<i>Mentzelia hirsutissima</i> Wats. Hairy stickleaf	CNPS: 2-1-1, List 2 Fed: SC Cal: -- County List B	Sonoran desert scrub (rocky); 0-700 m	March - May	Known from Borrego Palm Cyn, Box Cyn, Mtn Springs, SE of Agua Caliente, Canebrake Cyn, Rockhouse Cyn. Not observed on any of the properties.
<i>Mirabilis tenuiloba</i> Wats. Long-lobed four o'clock	CNPS: 1-1-1, List 4 Fed: -- Cal: -- County List D	Sonoran desert scrub; 300-1095 m	March - May	Known from Borrego Palm Cyn, Borrego Vly, The Narrows, Mount Tule, Carrizo Gorge, Mtn Springs, Jacumba, Lava Flow Wash, N. Mortero Wash, Inner Pasture Outlet Cyn. Not observed on any of the properties.
<i>Nemacaulis denudata</i> var. <i>gracilis</i> Wooly heads	CNPS: 2-2-1, List 2 Fed: -- Cal: -- County List B	Desert dunes, Sonoran desert scrub	March-May	Not observed on any of the properties.
<i>Pilostyles thurberi</i> Gray Thurber's pilostyles	CNPS: 1-1-1, List 4 Fed: -- Cal: -- County List D	Sonoran desert scrub; 0-365 m	January	Known from Coyote Creek, below Borrego Vly, Font's Point Wash, below the Carrizo Overlook, near Imperial County Line on S-2. Not observed on any of the properties.
<i>Selaginella eremophylla</i> Maxon Desert spike moss	CNPS: 3-2-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (gravelly or rocky), 200-900 m	May-July	Not observed; no suitable habitat.
<i>Senna covesii</i> (Gray) H. Irwin & Barneby Cove's cassia	CNPS: 2-2-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (sandy); 500-1070 m	March - June	Known from Various desert locations (see Beauchamp). Not observed on any of the properties.

<i>Mirabilis tenuiloba</i> Wats. Long-lobed four o'clock	CNPS: 1-1-1, List 4 Fed: -- Cal: -- County List D	Sonoran desert scrub; 300-1095 m	March - May	Known from Borrego Palm Cyn, Borrego Vly, The Narrows, Mount Tule, Carrizo Gorge, Mtn Springs, Jacumba, Lava Flow Wash, N. Mortero Wash, Inner Pasture Outlet Cyn. Not observed on any of the properties.
<i>Spermolepis echinata</i> (DC.)Heller Bristly scaleseed	CNPS: 3-1-1, List 2 Fed: -- Cal: -- County List B	Sonoran desert scrub (sandy or rocky); 60-1500 m	March - April	Known only from Borrego Valley. Not observed on any of the properties.
<i>Xylorhiza orcuttii</i> (Vasey & Rose) Greene Orcutt's woody aster	CNPS: 2-2-2, List 1B Fed: -- Cal: -- County List A	Sonoran desert scrub, 20-365 m	March - April	Known from Borrego Valley, Borrego Springs, Benson Dry Lake, Oil Well, Split Mountain, Banner Grade, Carrizo Stage Station, Palm Spring, Canyon Sin Nombre. Not observed on any of the properties.

SOURCES: Tibor (2001); Beauchamp, R. Mitchel, 1986; Munz, Philip A., 1974; Hickman, 1993; CDF & G's Natural Diversity Database (2002)

SEE APPENDIX 7 FOR EXPLANATION OF STATUS CODES

APPENDIX 6. SENSITIVE ANIMAL SPECIES POTENTIALLY OCCURRING ON-SITE

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	POTENTIAL ON-SITE
INVERTEBRATES				
<i>Pseudocopaesodes eunus eunus</i> Alkali skipper	County: Group 1	Host plant is <i>Distichlis spicata</i> var. <i>stricta</i> . Found in grassy spots on alkali flats.	Spring	Known from Sentenac Cienga. No host plant or suitable habitat observed on-site.
AMPHIBIANS AND REPTILES				
<i>Crotalus ruber ruber</i> Northern red-diamond rattlesnake	Fed: SC Cal: -- CDFG: CSC County: Group 2	Rocky brushlands, grassland, and cultivated areas.	Spring – Fall	Not observed on-site; moderate potential for occurrence.
<i>Phrynosoma mcallii</i> Flat-tailed horned lizard	Fed: SC Cal: -- CDFG: CSC, Protected County: Group 1	Restricted to desert washes & desert flats in central Riverside, eastern San Diego, and Imperial counties. Critical habitat element is fine sand, into which lizards burrow to avoid temperature extremes. Requires vegetative cover & ants.	April – September	Assumed present on Parcels A and B.
<i>Sauromalus obesus</i> Chuckwalla	Fed: SC Cal: -- County: Group 2	Desert woodland and scrub; most common in creosote communities. Restricted to areas with rocks and boulders.	Spring – Fall	Not observed; low potential due to lack of suitable habitat.
<i>Uma notata notata</i> Colorado desert fringe-toed lizard	Fed: SC Cal: -- CDFG: CSC County: Group 1	Restricted to dunes, flats, riverbanks and washes; generally associated with areas of scant vegetation such as creosote scrub, with fine, loose sand.	March-September	Observed on Parcels A and B
BIRDS				
<i>Athene cunicularia</i> Burrowing owl	Fed: SC Cal: -- CDFG: CSC MSCP: NE,C County Group 1	Grassland, coastal strand, agricultural fields. Found in open, dry, nearly or quite level grassland, prairie, desert floor. Dependent upon relatively large burrowing mammals, especially California ground squirrel.	Anytime	Burrows did not show characteristics. No pellets, bone fragments, or feathers observed around rodent holes.
<i>Buteo regalis</i> Ferruginous hawk	Fed: SC Cal: -- CDFG: CSC MSCP: C County: Group 1	Grassland, agricultural fields	October – March	Not observed.

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	POTENTIAL ON-SITE
<i>Buteo swainsoni</i> Swainson's hawk	Fed: SC Cal: T MSCP: C County: Group 1	Agricultural fields, grassland, desert	March - May; September - October	May forage over area. No roosting habitat present on-site.
<i>Cathartes aura</i> Turkey Vulture	Fed: -- Cal: -- County: Group 1	Common in dry, open country, woodlands, farmlands. Nests in rocky outcrops with protected crevices, caves, or old mines	Year round	Could forage over the area. No nesting habitat on-site.
<i>Circus cyaneus</i> Northern Harrier	Fed: -- Cal: -- CDFG: CSC MSCP: C County: Group 1	Grasslands, from salt grass in desert sink to mtn. cienegas. Nests on the ground in shrubby areas, usually at marsh edges. Nests are mounds of sticks in wet areas.	March-September	Not observed on Parcels A or B; one individual seen flying over Southern Corridor.
<i>Falco mexicanus</i> Prairie falcon	Fed: SC Cal: -- CDFG: CSC County: Group 1	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	September - March	Not observed; could potentially forage.
<i>Lanius ludovicianus</i> Loggerhead shrike	Fed: SC Cal: -- CDFG: CSC NAS: Declining County: Group 1	Agricultural land; desert washes, & desert-edge scrub; grassland; beach areas with scattered bushes; broken chaparral; areas of open ground for foraging near bushes and trees for nesting & perching	Anytime; nests March – June	Observed on-site
<i>Larus californicus</i> California gull	Fed: SC Cal: -- CDFG: CSC County: Group 2	Coastal, garbage dumps, inland lakes	Anytime	Not observed on-site. Low potential for occurrence.
<i>Toxostoma lecontei lecontei</i> Leconte's thrasher	Fed: SC Cal: -- CDFG: CSC County: Group 2	Desert resident. Primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2 - 8 ft above ground.	Anytime	Not observed on-site. Moderate potential for occurrence.
MAMMALS				

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	POTENTIAL ON-SITE
<i>Antrozous pallidus</i> Pallid bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Deserts, grasslands, shrublands, woodlands, and forests. More common in open, dry habitats with rocky areas for roosting; may also roost in tree cavities.	Spring - summer	No suitable roosting habitat on-site; may forage over area.
<i>Bassariscus astutis</i> Ringtail	Fed: SC Cal: -- County: Group 2	Brushy and wooded areas at lower and mid-elevations. Prefers water courses. Preys on mice, woodrats, and soft fruit such as berries.	Anytime	Unlikely to occur on-site.
<i>Chaetodipus (=Perognathus) fallax pallidus</i> Pallid San Diego Pocket Mouse	Fed: SC Cal: -- CDFG: -- County: Group 2	Chaparral or open sandy areas	Spring - summer	Not observed; low-moderate potential to occur.
<i>Corynorhinus townsendii townsendii</i> Townsend's western big-eared bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Humid coastal regions of northern and central California. Roosts in limestone caves, lava tubes, mines, buildings, etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limited. Extremely sensitive to disturbance.	Spring - summer	No suitable roosting habitat on-site; may forage over area.
<i>Euderma maculatum</i> Spotted bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Roosts in rock crevices on high cliffs.	Spring - fall	No suitable roosting habitat on-site; may forage over area.
<i>Felis concolor</i> Mountain lion	MSCP:C County: Group 2	Open expanses of land, forest and shrubland habitats where deer are found	Anytime	Unlikely; food source (deer) not present
<i>Macrotus californicus</i> California leaf-nosed bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrubland, palm oasis. Needs rocky, rugged terrain with mines or caves for daytime roosting; night roosts may include open buildings, cellars, porches, rocks, and mines.	Spring and summer, just after sunset	No suitable roosting habitat on-site; may forage over area.
<i>Myotis ciliolabrum</i> Small-footed myotis	Fed: SC Cal: -- County: Group 2	NDDB reports only from mines in San Bernardino Co. (in pinyon-juniper woodland), Kern Co. (in oak woodland), and Imperial County (in creosote bush scrub). Roosts in rock faces, clay banks, barns, between boulders, in caves and mines.	Spring - summer	No suitable roosting habitat on-site; may forage over area.

SPECIES	STATUS	HABITAT	OPTIMUM TIME FOR SURVEY	POTENTIAL ON-SITE
<i>Nyctinomops lemosacca</i> Pocketed free-tailed bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Variety of arid areas in So. Cal: pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs	Anytime	No suitable roosting habitat on-site; may forage over area.
<i>Nyctinomops macrotis</i> Big free-tailed bat	Fed: SC Cal: -- CDFG: CSC County: Group 2	Low-lying arid areas in southern California. Need high cliffs or rocky outcrops; sometimes found in man-made structures.	Anytime	No suitable roosting habitat on-site; may forage over area.
<i>Odocoileus heminous</i> Mule deer	Fed: SC Cal: -- MSCP:C County: Group 2	Relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats.	Anytime	No deer, tracks, or sign observed on-site.
<i>Ovis canadensis cremnobates</i> Peninsular bighorn sheep	Fed: PE Cal: T CDFG: Protected County: Group 1	Open desert slopes below 4000 ft MSL from San Gorgonio Pass south to Mexico. Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes, with available water.	Summer	No suitable habitat on-site.
<i>Perognatus longimembris internationalis</i> Jacumba little pocket mouse	Fed: SC Cal: -- CDFG: CSC County: Group 2	Lower elevation grassland, alluvial sage scrub, and coastal sage scrub, southwestern California and Baja California	Spring - summer	Not observed; low potential for occurrence.
<i>Taxidea taxus</i> Badger	Fed: SC Cal: -- MSCP:C County: Group 2	Grasslands, savannahs, & mtn meadows near timberline are preferred habitat. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents, digs burrows.	Mostly active at night	Known from Borrego Springs area. No burrows or diggings observed. Lack of ground squirrels and gophers (preferred prey). Could occur.

Sources: CDF & G's Natural Diversity Database (2003), S.D. County Sensitive Birds, Mammals, and Herptiles lists; MSCP Target Species List (1/25/93), National Audubon Society (NAS, 1990), Williams, Mies, and Stokes (2002).

SEE APPENDIX 7 FOR EXPLANATION OF STATUS CODES.

Appendix 7. Explanation of Status Codes

The CNPS R-E-D Code

R (Rarity)

- 1 Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time
- 2 Distributed in a limited number of occurrences, occasionally more if each occurrence is small
- 3 Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported

E (Endangerment)

- 1 Not endangered
- 2 Endangered in a portion of its range
- 3 Endangered throughout its range

D (Distribution)

- 1 More or less widespread outside California
- 2 Rare outside California
- 3 Endemic to California

The CNPS Lists

- List 1A Plants that are Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 Plants About Which We Need More Information - A Review List
List 4 Plants of Limited Distribution - A Watch List

State-Listed Plants and Animals

- CE State-listed, endangered
CT State-listed, threatened
CR State-listed, rare
CC Candidate for State listing
CSSC Species of Special Concern
P Protected

Appendix 7. Continued

Federal-Listed Plants and Animals

- FE Federal-listed, Endangered
- FT Federal-listed, Threatened
- PE Federal-proposed, Endangered
- PT Federal-proposed, Threatened
- R Federal-listed, Rare
- C Candidate species for federal-listing
- SC Species of Concern

MSCP = Target Species of Multiple Species Conservation Program

- NE Narrow Endemic
- C Covered Under the MSCP
- NC Not Covered Under the MSCP

County Lists

- A Plants rare, threatened or endangered in California and elsewhere
- B Plants rare, threatened or endangered in California but more common elsewhere
- C Plants which may be quite rare, but need more information to determine their true rarity status
- D Plants of limited distribution and are uncommon, but not presently rare or endangered

APPENDIX 8

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Results of focused surveys for flat-tailed horned lizard (*Phrynosoma mcallii*) at properties near the Borrego Springs Airport.

August 21, 2009

Prepared By:

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Introduction

This report summarizes the results of the flat-tailed horned lizard (*Phrynosoma mcallii*) surveys conducted from July 1-3, 2009 on properties immediately north of Borrego Springs Airport, San Diego County, California. The project area consists of approximately 350 acres of desert habitats bounded by Borrego Springs Airport and Palm Canyon Drive to the south, agricultural areas and Borrego Valley Road to the west, and desert habitats to the north and east. A solar facility with associated infrastructure is proposed at the site. The surveys were conducted on locations supporting sandy soils, with potential to support the species. The surveys consisted of plot counts, walking surveys, and driving surveys, and were conducted across various times and temperatures throughout each day. The surveys were conducted pursuant to Scientific Collecting Permit SC-008832, and followed recommended protocols in Appendices 5 and 6 of the Flat-tailed Horned Lizard Range-wide Management Strategy (FTHL ICC 2003). Both flat-tailed horned lizards and Colorado Desert fringe-toed lizards (*Uma notata notata*) were observed on roads near the project area.

The flat-tailed horned lizard is found in a restricted area of low desert habitat in southeastern California, southwestern Arizona, and adjacent Mexico. This lizard was proposed by the U.S. Fish and Wildlife Service for listing as a threatened species under the Endangered Species Act in 1993. In 2003, this proposal was withdrawn due to ongoing conservation efforts, such as the establishment of a Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). It is currently considered a California Species of Special Concern. This species is typically found in sandy flats and dunes, often supporting sparse desert

vegetation such as creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), or saltbush (*Atriplex* sp.). Though this species is typically found in areas of fine windblown sand, it occasionally is found in badlands, saltbush flats, and gravelly soils. This lizard is a specialized predator of ants, typically relatively large-bodied seed harvesters (*Pogonomyrmex* and *Messor*). It has declined throughout its range due to habitat fragmentation and degradation from agricultural development, urbanization, and off-road vehicle use (Jennings and Hayes 1994).

Flat-tailed horned lizards have long been known from Borrego Valley. The San Diego Natural History Museum contains three specimens labeled “Borrego Valley” collected between 1931 and 1940 (SD #4513, #4810, #33165). An additional specimen collected in 1935 (SD #23600) is from “Beatty’s (sic) Borrego Valley”, and likely refers to the homestead of Alfred Armstrong “Doc” Beatty, who owned 320 acres just south of present Borrego Springs Airport (Lindsay 2001). The California Natural Diversity Database contains a 1966 record of a flat-tailed horned lizard from the “north side of Palm Canyon Road, 2 miles east of Borrego Valley Road, Borrego Springs” which places it just south of the Borrego Springs Airport (CDFG 2009).

Existing Conditions

The majority of the project area consists of soils mapped as Indio silt loam, and Indio silt loam, saline (Map 1; Bowman 1973). Within the project area these soils consist of mudflats grown to saltbush, providing low quality habitat for the flat-tailed horned lizard. The remaining areas on the property are mapped as Rositas fine sand, and Rositas fine sand, hummocky (Map 1; Bowman 1973). These consist of aeolian sand that has been partially stabilized with vegetation

(Photo 1). Some of these sands form small dunes trending in a northwestern to southeastern direction.

The vegetation of the site consists of desert saltbush scrub. This habitat is dominated by low growing saltbush (*Atriplex* sp.). The Rositas fine sands support much of the same vegetation as the surrounding flats, but also support dense stands of Sahara mustard and other annuals (*Brassica tournefortii*; Photo 1).

Survey Design

The survey design followed recommendations in Appendices 5 and 6 of the Flat-tailed Horned Lizard Range-wide Management Strategy (FTHL ICC 2003). As recommended in the protocol, four, 1-hectare (2.5 acre) plots were established in each patch of suitable habitat. A patch of Rositas fine sand is located in the northwest corner (14.5 acres), therefore four plots were established in this area (Plots 5-8; Map 2). A small patch of Rositas fine sand is also located in the northeastern corner of the project area. As the entire patch was captured within the 1-hectare plot, a single plot was surveyed in this area (Plot 9). An additional four plot surveys were completed to the southeast of the project area (Plots 1-4; Map 2). This area has subsequently been dropped from consideration for the project. However, the plot data from these surveys is presented here for informational purposes.

As per the protocol, road surveys were conducted in the vicinity of the project area. These observations are further detailed below.

Survey Dates and Conditions:

July 1, 2009

6:00 AM - 10:30 AM; start: clear, calm, 78°F; end: overcast, south wind 10 mph, 92°, thunderstorm approaching

2:30 PM - 3:30 PM; start: overcast, humid, slight drizzle, calm, 94°; end: overcast, calm, 94°

5:30 PM - 6:30 PM; start: partly cloudy, northwest wind 4 mph, 97°; end: not recorded

July 2, 2009

6:20 AM - 8:45 AM; start: partly cloudy, calm, 80°; end: partly cloudy, calm, 94°

9:30 AM - 12:50 PM; start: clear, calm, 96°; end: clear, calm, 104°

7:00 PM - 8:30 PM; start: clear, west wind 8 mph, 100°; end: clear, west wind 10 mph, 96°

July 3, 2009

6:00 AM - 11:25 AM; start: clear, calm, 80°; end: clear, southwest wind 5 mph, 104°

Results

Plot Surveys

Four plots were established over Rositas fine sand in the southeastern portion of the project area.

Plots 1-4 run from west to east in this area (Map 2). Five plots were established over Rositas

fine sand along the northern edge of the project area. Plots 5-8 run from west to east in the

northwestern corner of the project area (Map 2). Plot 9 is located in the northeastern corner of

the project area (Map 2). No horned lizards were found during the plot surveys. Horned lizard

scat was found, typically clustered, and located on the sandy soils within each plot (Photo 2).

Between zero and 25 scats were found per plot, generally reflecting the amount of fine sands

within each survey area (Table 1).

Table 1. Plot Survey Summaries

PLOT ID	DATE	START TIME	START TEMP	END TIME	END TEMP	SUBSTRATE	SCATS	NOTES
1	7/1/09	6:30 AM	7:30 AM	78 °	88 °	Dunes	5	Scats found in small area on north side of plot.
2	7/1/09	7:45 AM	8:45 AM	88 °	93 °	Dunes	9	Scats at south end.
3	7/1/09	9:10 AM	10:10 AM	95 °	94 °	Dunes	9	Some scats fresh. T-storm approaching.
4	7/2/09	7:05 AM	8:05 AM	82 °	87 °	Dunes/Hardpan	25	Most scats clustered. 13 in SE corner.
5	7/2/09	10:51 AM	11:51 AM	103 °	104 °	Hardpan	1	Poor habitat
6	7/2/09	11:55 AM	12:55 PM	104 °	107 °	Dunes/Hardpan	8	Scats in north in low dunes.
7	7/3/09	6:05 AM	7:05 AM	81 °	88 °	Dunes/Hardpan	0	N. half of plot consolidated dune. S. half hardpan flat.
8	7/3/09	7:08 AM	8:08 AM	90 °	92 °	Dune/Hardpan	0	Dune on N. half, hardpan on S. half.
9	7/3/09	8:20 AM	9:20 AM	92 °	99 °	Dunes/Hardpan	14	Scats in NE quarter. High quality dune in small area.

Flat-tailed Horned Lizard Observations

As stated in the survey protocol, when active, flat-tailed horned lizards may be found in dirt roads and may flush when approached by a vehicle. While driving dirt access roads north of the project area, three flat-tailed horned lizards were observed over Rositas fine sands (Map 2; Table 2; Photos 3-5). Each of these lizards was found between 9:37 and 10:15 AM, when the air temperature was 98° F - 101° F. No desert horned lizards (*Phrynosoma platyrhinos*) were found.

Table 2. Flat-tailed Horned Lizard Capture Data

DATE	TIME	TEMP	SEX	SVL	NOTES
July 1, 2009	10:15 AM	98° F	M	76mm	Flushed while driving; adjacent to dirt road.
July 2, 2009	9:37 AM	99° F	F	76mm	Ran across road.
July 2, 2009	9:53 AM	101° F	?	?	Not captured. Ran down road; actively foraging. Ran into hole under shrub.

SVL=snout-vent length

Colorado Desert Fringe-toed Lizard (*Uma notata notata*)

The Colorado Desert fringe-toed lizard (*Uma notata notata*) is a California Species of Special Concern. Its habitat and distribution is very similar to the flat-tailed horned lizard, being found on fine, windblown sand fields throughout southeastern California (Jennings and Hayes 1994). It has declined due to the same habitat fragmentation and degradation issues as the flat-tailed horned lizard. Like the flat-tailed horned lizard, the Colorado Desert fringe-toed lizard has long been known from the Borrego Valley, including the vicinity of the project area. The Los Angeles County Museum of Natural History contains a specimen from “5 mi. east of Christmas Circle, Borrego Springs, on Palm Canyon Road” (LAM #52737). Cornell University contains eight specimens from the vicinity, including seven collected in 1974-75 from “6 km east of Borrego Springs” (CUMV #10094-99;10100). An eighth specimen from 1975 is labeled “3 km. northeast Borrego Springs on Borrego Valley Rd.” (CUMV #10093).

Potential habitat for this species was found in the same area of the site as the suitable habitat for the flat-tailed horned lizard. While driving the dirt access road north of the project area, two

fringe-toed lizards were observed running in the roadway (Map 2). One was approached closely and photographed (Photo 6).

Much of the Rositas sands in the region have been heavily invaded by Sahara mustard. This mustard grows in dense stands, which restricts the open nature of the habitat, potentially limiting the quality of this area for the fringe-toed lizard, which relies on speedy movement over open sand to escape predators. One research paper noted a negative correlation between density of Sahara mustard and density of fringe-toed lizards (Barrows and Allen 2007). This may explain why this lizard was attracted to the open roadways.

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Photo 1. Habitats of site showing Rositas fine sands in foreground and Indio silt loam in background. The sandy soils are well vegetated with Sahara mustard and other annuals. Photo by Kevin B. Clark on July 2, 2009 from the northern property boundary looking to the southwest.



Photo 2. Typical *Phrynosoma* scat found during the plot surveys. Notice shiny surface and contents of small ant parts.



Photo 3. Flat-tailed horned lizard found near northern access road on July 1, 2009.



Photo 4. Second flat-tailed horned lizard found at 9:37 AM on July 2, 2009.



Photo 5. Third flat-tailed horned lizard found at 9:53 AM on July 2, 2009. This lizard ran into a burrow before it could be captured.



Photo 6. Colorado Desert fringe-toed lizard (*Uma notata notata*) found on the northern access road on July 2, 2009.



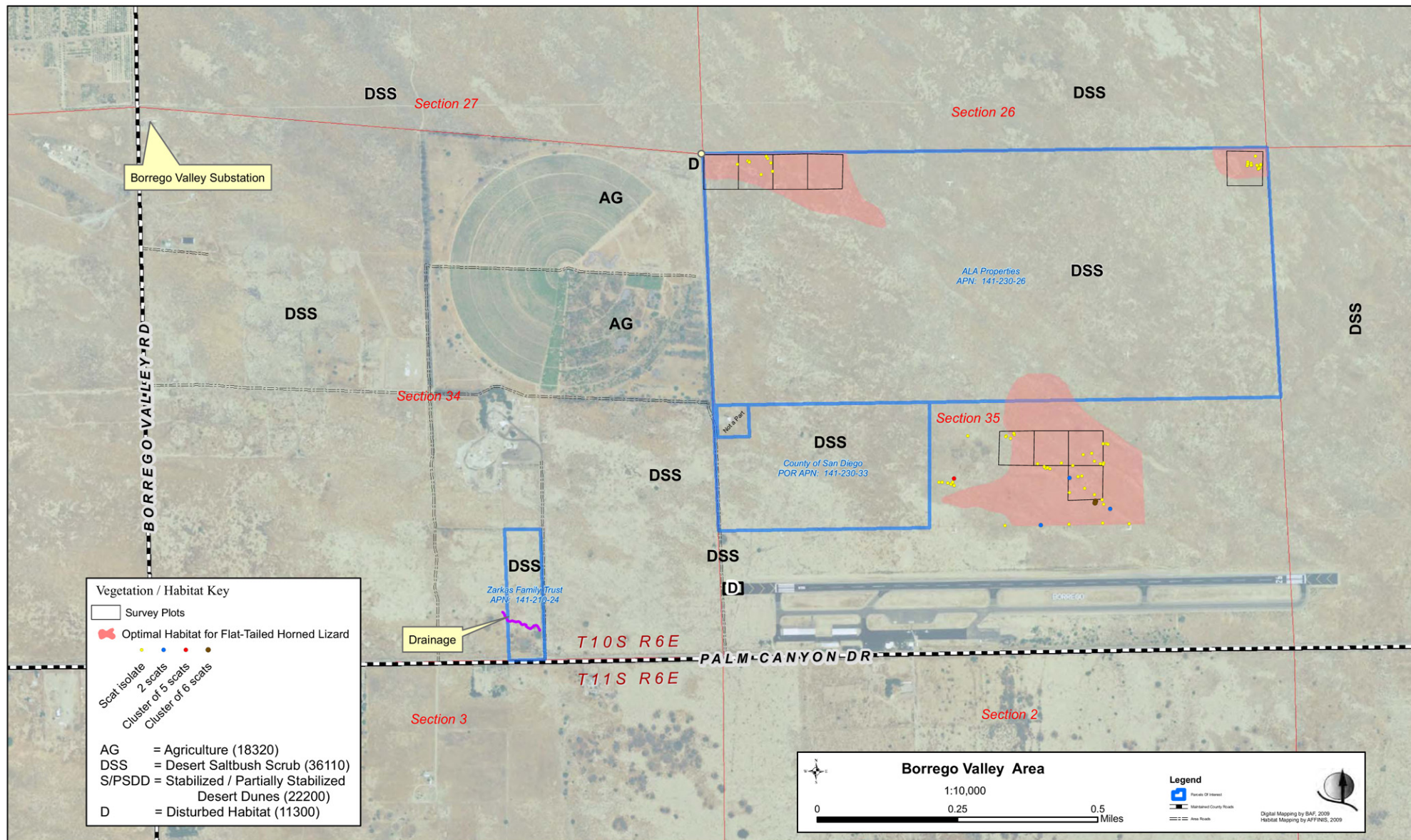
SOURCE: SOIL CONSERVATION SERVICE, 1969-1970

Affinis

Shadow Valley Center
 847 Jamacha Road
 El Cajon, CA 92019

SOILS MAP

MAP 1



FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)
(LIGHT MEDIUM HEAVY)
KEELER WOLFE VEG SERIES

CREOSOTE/AMBROSIA MESQUITE HUMMOCKS
CREOSOTE/SALTBUSH SPARSE CREOSOTE

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT
NUMBER OF OHV TRACKS	0	
DISTANCE TO MESQUITE (M)	0	
GROUND SQUIRRELS PRESENT (YES OR NO)		

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

SPECIES	EASTING	NORTHING	NOTES
None			

ANT SCAT PRESENT	5
SUSPECTED FTHL PRESENCE	1/13

NOTES 5 scats found in small area on north side of p6t

FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)

KEELER WOLFE VEG SERIES

CREOSOTE/SALTBUSH SPARCE CREOSOTE

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT <i>Loggerhead Shrike</i>
NUMBER OF OHV TRACKS	NA	
DISTANCE TO MESQUITE (M)	NA	
GROUND SQUIRRELS PRESENT (YES OR NO)		

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

[illegible]

		NOTES 9 Scats - at South end
ANT SCAT PRESENT	9	
SUSPECTED FTHL PRESENCE	1/15	

FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)

(LIGHT MEDIUM HEAVY)

KEELER WOLFE VEG SERIES

VEGETATIVE COVER

CREOSOTE/AMBROSIA MESQUITE HUMMOCKS

CREOSOTE/SALTBUSH SPARCE CREOSOTE

THREATS

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT
NUMBER OF OHV TRACKS	NA	
DISTANCE TO MESQUITE (M)	NA	
GROUND SQUIRRELS PRESENT (YES OR NO)	NO	

ANTS (CIRCLE 1)

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

FTHL AND COFTL OCCUPANCY

[illegible]

		NOTES
ANT SCAT PRESENT	9	9 rats found - some fresh
SUSPECTED FTHL PRESENCE	Yes	Cloudy windy - thunder storm approaching

FIGURE 1

FTHL OCCUPANCY ESTIMATION DATASHEET

DATE	2 July 2009	MA	Bonneso	OBSERVER	Kevin Clark	VISIT #	1
PLOT ID	4	STRATA		STRT TIME	0705	END TIME	0805
WIND	SW 1 mph	CLOUDS	20%	STRT TEMP	82	END TEMP	87

SUBSTRATE (CIRCLE 1)

SANDY FLAT	HARDPAN FLAT	SANDY WASH
GRAVEL FLAT	MUD HILL	DUNES
GRAVELY HARDPAN	MANY SMALL WASHES	

ORGANIC LITTER)

(LIGHT MEDIUM HEAVY)
KEELER WOLFE VEG SERIES

VEGETATIVE COVER

CREOSOTE/AMBROSIA	MESQUITE HUMMOCKS
CREOSOTE/SALTBUSH	SPARCE CREOSOTE

THREATS

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT <i>Losshead snake</i>
NUMBER OF OHV TRACKS	NA	
DISTANCE TO MESQUITE (M)	NA	
GROUND SQUIRRELS PRESENT (YES OR NO)	N	

ANTS (CIRCLE 1)

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

FTHL AND COFTL OCCUPANCY

SPECIES	EASTING	NORTHING	NOTES
None			
ANT SCAT PRESENT	25	NOTES 25 scat found - most clustered. 13 in SE corner of plot	
SUSPECTED FTHL PRESENCE	Yes		

FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)

KEELER WOLFE VEG SERIES

CREOSOTE/SALTBUSH SPARCE CREOSOTE

OTHER PREDATORS PRESENT

None

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

[illegible]

		NOTES <i>1 scat - poor habitat</i>
ANT SCAT PRESENT	<i>1</i>	
SUSPECTED FTHL PRESENCE	<i>rarely</i>	

FIGURE 1

FTHL OCCUPANCY ESTIMATION DATASHEET

DATE 2 July 2009 MA OBSERVER Kevin Clark VISIT # 1
 PLOT ID 6 STRATA STRT TIME 1155 END TIME 1255
 WIND SE 4 mph CLOUDS Clear STRT TEMP 104 END TEMP 107

SUBSTRATE (CIRCLE 1)

SANDY FLAT HARDPAN FLAT SANDY WASH
 GRAVEL FLAT South MUD HILL DUNES North
 GRAVELY HARDPAN MANY SMALL WASHES

ORGANIC LITTER)

(LIGHT MEDIUM HEAVY)

KEELER WOLFE VEG SERIES

VEGETATIVE COVER

CREOSOTE/AMBROSIA MESQUITE HUMMOCKS
CREOSOTE/SALTBUSH SPARCE CREOSOTE

THREATS

DISTANCE TO OHV ROUTE	<u>NA</u>	OTHER PREDATORS PRESENT <u>None</u>
NUMBER OF OHV TRACKS	<u>1</u>	
DISTANCE TO MESQUITE (M)	<u>1</u>	
GROUND SQUIRRELS PRESENT (YES OR NO)	<u>1</u>	

ANTS (CIRCLE 1)

MESSOR PERGANDII	<u>ABSENT</u>	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	<u>ABSENT</u>	PRESENT	ABUNDANT

FTHL AND COFTL OCCUPANCY

SPECIES	EASTING	NORTHING	NOTES
ANT SCAT PRESENT	<u>8</u>	NOTES <u>8 scats all from northern half of property in low dunes.</u>	
SUSPECTED FTHL PRESENCE	<u>yes</u>		

FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)
(LIGHT MEDIUM HEAVY)
KEELER WOLFE VEG SERIES

THREATS

ANTS (CIRCLE 1)

FTHL AND COFTL OCCUPANCY

10

FIGURE 1

FTHL OCCUPANCY ESTIMATION DATASHEET

DATE	3 July 2009	MA	Bonnie Airport	OBSERVER	Kevin Clark	VISIT #	1
PLOT ID	8	STRATA		STRT TIME	0705	END TIME	0908
WIND	Calm	CLOUDS	Clear	STRT TEMP	90	END TEMP	92

SUBSTRATE (CIRCLE 1)

SANDY FLAT	HARDPAN FLAT	SANDY WASH
GRAVEL FLAT	MUD HILL	DUNES
GRAVELY HARDPAN	MANY SMALL WASHES	

ORGANIC LITTER)

(LIGHT MEDIUM HEAVY)

KEELER WOLFE VEG SERIES

VEGETATIVE COVER

CREOSOTE/AMBROSIA	MESQUITE HUMMOCKS
CREOSOTE/SALTBUSH	SPARCE CREOSOTE

THREATS

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT
NUMBER OF OHV TRACKS		
DISTANCE TO MESQUITE (M)		
GROUND SQUIRRELS PRESENT (YES OR NO)		

ANTS (CIRCLE 1)

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

FTHL AND COFTL OCCUPANCY

SPECIES	EASTING	NORTHING	NOTES

ANT SCAT PRESENT	0	NOTES No scat found. Consolidated dune on north half of plot. Hardpan on south.
SUSPECTED FTHL PRESENCE	NO	

FTHL OCCUPANCY ESTIMATION DATASHEET

SUBSTRATE (CIRCLE 1)

ORGANIC LITTER)

KEELER WOLFE VEG SERIES

CREOSOTE/AMBROSIA	MESQUITE HUMMOCKS
CREOSOTE/SALT BUSH	SPARSE CREOSOTE

DISTANCE TO OHV ROUTE	NA	OTHER PREDATORS PRESENT
NUMBER OF OHV TRACKS		
DISTANCE TO MESQUITE (M)		
GROUND SQUIRRELS PRESENT (YES OR NO)		

MESSOR PERGANDII	ABSENT	PRESENT	ABUNDANT
POGONOMYRMEX SPP.	ABSENT	PRESENT	ABUNDANT

[illegible]

		NOTES 14 scats found - all in northeast quadrant of plot - high quality dune in that area
ANT SCAT PRESENT	14	
SUSPECTED FTHL PRESENCE	yes	

Horned Lizard Observation Data Sheet

Sheet # _____

(Time should be recorded in 24:00 clock)

Use NAD27 projection and specify UTM Zone _____

Observer	Date	Time	Easting (UTM)	Northing (UTM)	Plot #	I.D. #	Photo #
Kevin Clark	2 July 2009	1015	0562912	3681580			948
Species	Sex	SVL (mm)	Weight (g)	Notes:			
(FTHL) DHL	(M) F	76 mm		Adjacent to dirt road. North of northern boundary of property 98°F			
Kevin Clark	3 July 2009	09:37	0563685	3681587			957
Species	Sex	SVL (mm)	Weight (g)	Notes:			
(FTHL) DHL	M (E)	76 mm		Ran across road North of prop. 99°F Very yellow			
	3 July 2009	09:53	0562447	3681580			963
Species	Sex	SVL (mm)	Weight (g)	Notes:			
(FTHL) DHL	M F			Ran down road - warm and actively foraging. Ran into hole under shrubs. 101°F			
Species	Sex	SVL (mm)	Weight (g)	Notes:			
FTHL DHL	M F						
Species	Sex	SVL (mm)	Weight (g)	Notes:			
FTHL DHL	M F						
Species	Sex	SVL (mm)	Weight (g)	Notes:			
FTHL DHL	M F						
Species	Sex	SVL (mm)	Weight (g)	Notes:			
FTHL DHL	M F						
Species	Sex	SVL (mm)	Weight (g)	Notes:			
FTHL DHL	M F						

Flat-tailed Horned Lizard Rangewide Management Strategy



2003 Revision

An Arizona-California Conservation Strategy

Prepared and edited by the

Flat-tailed Horned Lizard Interagency Coordinating Committee

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Appendix 7. Fencing and Removal Survey Protocols

In accordance with Measure 8 of the Mitigation section, sites of permanent or long-term (greater than one year) projects in MAS where continuing activities are planned and where FTHL mortality could occur may be enclosed with FTHL barrier fencing. After clearing the enclosed area of horned lizards following the protocol described in this appendix, no on-site monitor is required (see Measure 7 of the Mitigation section). Fencing for the purpose of producing a FTHL barrier along roads (see Mitigation Measure 10) shall also follow these protocols as applicable. Prior to any fencing or removal survey, a proposal shall be developed and approved by AGFD (in Arizona), CDFG (in California), and/or by the state or federal agency that manages the lands to be surveyed.

Fencing Protocol

Barrier fences for the exclusion of FTHLS shall follow these specifications:

- 1) The barrier fence shall be constructed along the entire perimeter of the project and be inset sufficiently from the perimeter of the parcel to allow for construction and maintenance.
- 2) Barrier material shall be 0.25" mesh hardware cloth and 36" in height
- 3) Barrier material shall be buried 6" deep, providing 30" above the surface.
- 4) Barrier material shall be securely attached (using metal clips or wire—not plastic) to t-posts or fence posts, and to barbed wire strung at heights of 15" and 30". A third barbed wire may be strung above the FTHL proof fencing to deter vehicles.
- 5) Additional t-posts or fence posts shall be placed at any junctions between rolls of hardware cloth to discourage the formation of gaps.
- 6) An experienced biological monitor shall oversee the construction of the barrier fence and be on-site to search for and remove FTHLS during surface-disturbing activities.
- 7) The entire fence shall be maintained in perpetuity, including but not limited to the repair of gaps under or in the fence, and accumulation of plant debris or sand on the outside of the fence.
- 8) Biological monitors shall conduct a removal survey, following the protocol below, only after the fence construction is completed.

Removal Survey Protocol

Removal surveys shall be conducted after barrier fence completion and prior to construction activities. Surveys shall follow these guidelines:

- 1) Surveys shall be conducted by experienced biological monitors as described in Appendix 6.
- 2) Surveys shall occur only during appropriate survey conditions as described in Appendix 6

- 3) Projects < 4 acres (1.6 ha) in size require four hours of survey effort. For larger projects, minimum survey effort shall be 0.5 hour per acre. The land managing agency may require a greater survey effort.
- 4) Survey methods shall be designed to achieve a maximal capture rate and shall include but not be limited to the following: strip transects, tracking, and raking around shrubs.
- 5) Survey methods shall incorporate a systematic component to ensure that the entire fenced project site is surveyed. A modification of the Population Monitoring Protocol (Appendix 7) may be used.
- 6) All encountered FTHLS will be collected and relocated to a nearby safe habitat in accordance with the removal plan, approved by AGFD or CDFG.

APPENDIX 9

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JURISDICTIONAL WATERS

Borrego Solar Project

Five areas were surveyed: Parcel A, Parcel B, Parcel C, Northern Transmission Corridor, and Southern Utilities Corridor (Figure 1). Field work was done on March 25 and 26, June 10, July 2 and 3, and November 20, 2009. No wetlands/ jurisdictional waters were found on Parcel A, Parcel B, or the Northern Transmission Corridor. The overall topography is generally descending very gradually from northwest to southeast across the region (Figure 2). No waterways or channels were found in the lower areas. Parcel B has three ridge-like sandy dunes on its eastern portion, also trending from northwest to southeast. No channels or indications of linear flow were found, even in the lowest areas between the ridge-like dunes

On Parcel C, an ephemeral drainage enters the property from the west, crosses to the eastern boundary, and then turns south as a roadside ditch along the eastern boundary of the parcel (Figures 1 and 3). No indications of water flow in the ditch in either direction were present in the spring and summer field work. Rain occurred before the November trip, resulting in flow indications in the ditch to the south, and then turning to the west to terminate in an area of cracked mud. The ephemeral segment is approximately 500 feet long, and averages 1.5 feet in width. The drainage disappears north of Palm Canyon Road. There is no culvert or roadside ditch at Palm Canyon Road. Any flow apparently percolates and/or evaporates. The ephemeral drainage is an erosion feature.

On the Southern Utilities Corridor, two small segments of ephemeral drainages were observed, one on the west side of the dirt/gravel roadway, and one on the east side (Figure 1). These are small erosion features. The western ephemeral drainage runs southeasterly to the roadway, and then south along the roadway for a short distance before disappearing (Figure 4). Total length of this ephemeral segment was approximately 75 feet, with an average width of 1.0 feet. The eastern drainage runs southeasterly and then south, for approximately 125 feet, and disappears. Its average width was also 1.0 feet. No further indication of the drainage could be found to the south, towards Palm Canyon Road.

The ephemeral drainage segments were identified by the Ordinary High Water Mark. In the federal structure, streams are a separate category from wetlands -- both are types of Waters of the United States. Streams are jurisdictional areas below the Ordinary High Water Mark (OHWM), defined at 33 CFR 328.3(e):

"The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and other debris, or other appropriate means that consider the characteristics of the surrounding areas."

The Army Corps' Regulatory Guidance Letter No. 05-05, "Ordinary High Water Mark Identification" December 7, 2005, discussed these physical characteristics to be considered in making an OHWM determination. Additionally, paragraph 3d noted:

"When making OHWM determinations, districts should be careful to look at characteristics associated with ordinary high water events, which occur on a regular or frequent basis. Evidence resulting from extraordinary events, including major flooding and storm surges, is not indicative of the OHWM..."

The Army Corps' field guide to identification of the OHWM (U.S. Army Corps of Engineers, 2008a) was also used. The active channel described by this guide corresponded to the area below the OHWM .

Both Parcel C and the Southern Utilities Corridor border Palm Canyon Road (Figure 1). The Southern Transmission Corridor is bisected by a maintained road, and the eastern boundary of Parcel C is a maintained road. Both areas have had ground disturbances in the past. The top photo of Figure 5 shows the overall barrenness of much of Parcel C. The lower photo shows equipment disturbances on the Southern Utilities Corridor. These spatially-intermittent drainages appear to be the result of ground surface disturbances that concentrate runoff for short distances.

Occasional flatter areas of surface soil cracks were found, mostly on the western portion of Parcels A and B (Figure 6). Cracked soil can be an

indicator of wetland hydrology, but surface soil cracks "...may also occur in temporary ponds and puddles in non-wetlands; these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils." (U.S. Army Corps of Engineers, 2008b).

Many of the areas of surface soil cracks were barren or nearly barren of vegetation (Figures 6 and 7). No hydrophytic vegetation species were found on these areas. When vegetation was present, two species, a mallow weed (*Malva neglecta*) and pygmy weed [*Crassula connata*] were dominant. These species were found throughout the property, and were not concentrated on these cracked soil areas. *Malva neglecta* has no wetland indicator status, and pygmy weed is listed as Facultative, defined as "Equally likely to occur in wetlands or non-wetlands" (U.S. Fish & Wildlife, 1996).

No wetland soils, hydric soils, were found. Four soil pits were dug per federal protocol (Environmental Laboratory, 1987; U.S. Army Corps of Engineers, 2008b). One pit was dug near the northeastern corner of Parcel A (lower photo of Figure 7), and one near the southwestern corner of Parcel B. Two pits were dug on Parcel C, one in an area of cracked soil (top photo of Figure 7) and one in a raised area immediately adjacent. All excavated soil cylinders immediately crumbled upon removal, and no profile could be identified from either the removed soils or any pit wall. There were no indicators of wetland soil characteristics. No differences were observed between the soils excavated in the raised area and in the cracked soil area other than the soil from the cracked soil area was slightly darker.

Rainfall in the Borrego area, as with most desert areas, can come in intense but short thunderstorms. This can allow water to collect on these flatter areas. Some of this water then percolates down into the soil, and the rest evaporates, resulting in the cracked soil. Bowman (1973) noted the permeability for the soil type (Indio silt loam, saline) in the western portion "...is moderate to moderately rapid."

Average annual rainfall is 6.3 inches (Caltrans - Sonoma State University - Office of Water Programs, 2009). There is little rainfall, the soil is permeable, and evaporation rates are high. It appears these areas do not hold enough water for a long enough period of time to support wetland plants or to allow wetland soils to develop.

Army Corps Jurisdiction. The ephemeral drainages have no surface link off the property. Surface flows in the Borrego area move to and terminate in the Borrego Sink (Figure 8), so the waters have no jurisdictional surface link to a Traditionally Navigable Water (RBF, 2009). Based on these observations, the ephemeral drainages would not be federally jurisdictional under the Clean Water Act (EPA, 2008).

County of San Diego Jurisdiction. The ephemeral drainages would not be jurisdictional under the County's Resource Protection Ordinance. The RPO does include the situation of "An ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system." These ephemeral drainages are erosion features. They were found only on Parcel C and the Southern Transmission Corridor, which have been heavily disturbed. No such drainages were found anywhere on the nearby, much larger Parcels A and B, which are relatively undisturbed as compared to Parcel C or the Southern Transmission Corridor.

These ephemeral drainages have a soil substratum. None of the three erosional features connect to any downstream drainages. No wetland plant species were found. No remains of aquatic animal species (crustacean carapaces, desiccated amphibian larvae) were found. Any water collected in the drainages either evaporates or percolates into the soil, as does any precipitation on the adjacent upland areas. As such, these ephemeral drainages do not substantially contribute to biological functions or values in the drainage system.

California Department of Fish and Game. The ephemeral drainages could be determined to be jurisdictional by the California Department of Fish and Game, as its definition includes ephemeral streams. The ephemeral drainage segments on Parcel C and on the Southern Utilities Corridor have a total area of approximately 950 square feet, approximately 0.02 acre. Any alteration to an ephemeral stream – filling, placement of culverts, rerouting... – would require a Notification Package to the Department. Upon review of that packet, the Department would determine if a Streambed Alteration Agreement is needed.

Bowman, Roy H.

1973 *Soil Survey, San Diego Area, California, Part I.* United States Department of Agriculture, Beltsville, MD.

CALTRANS - Sonoma State University - Office of Water Programs

2009 Hydrologic Subarea 722.13 Borrego Sink.
<http://stormwater.water-programs.com/wqpt/SelectByHSA.asp>

Environmental Laboratory

1987 Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

EPA

2008 Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*. December 2, 2008. This guidance incorporates revisions to the EPA/Army Memorandum originally issued on June 6, 2007.

RBF

2009 Euris Energy - Borrego Unmanned Photovoltaic Solar Farm. Letter of July 6, 2009. RBF Consulting, San Diego, California.

U.S. Army Corps of Engineers

2008a A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. A Delineation Manual. Robert W. Lichvar and Shawn M. McColley. ERDC/CRREL TR-08-12. August 2008.

2008b Regional Supplement to the Corps of Engineers Wetland

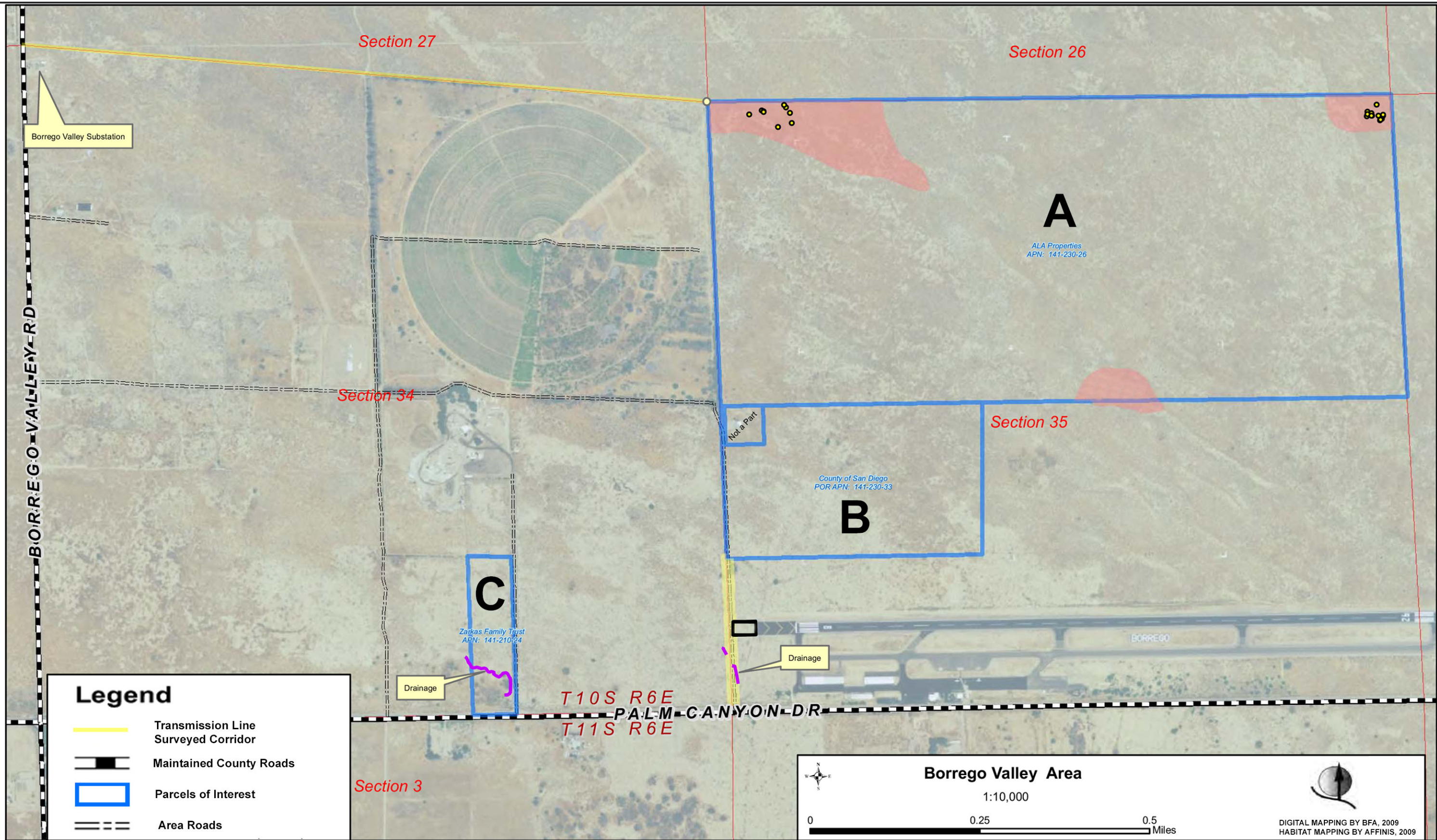
Delineation Manual: Arid West Region (Version 2.0), ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. September 2008.

U.S. Fish & Wildlife Service

1996 National List of Vascular Plant Species That Occur in Wetlands: 1996 National Summary (1996 National List).

Water Policy Report

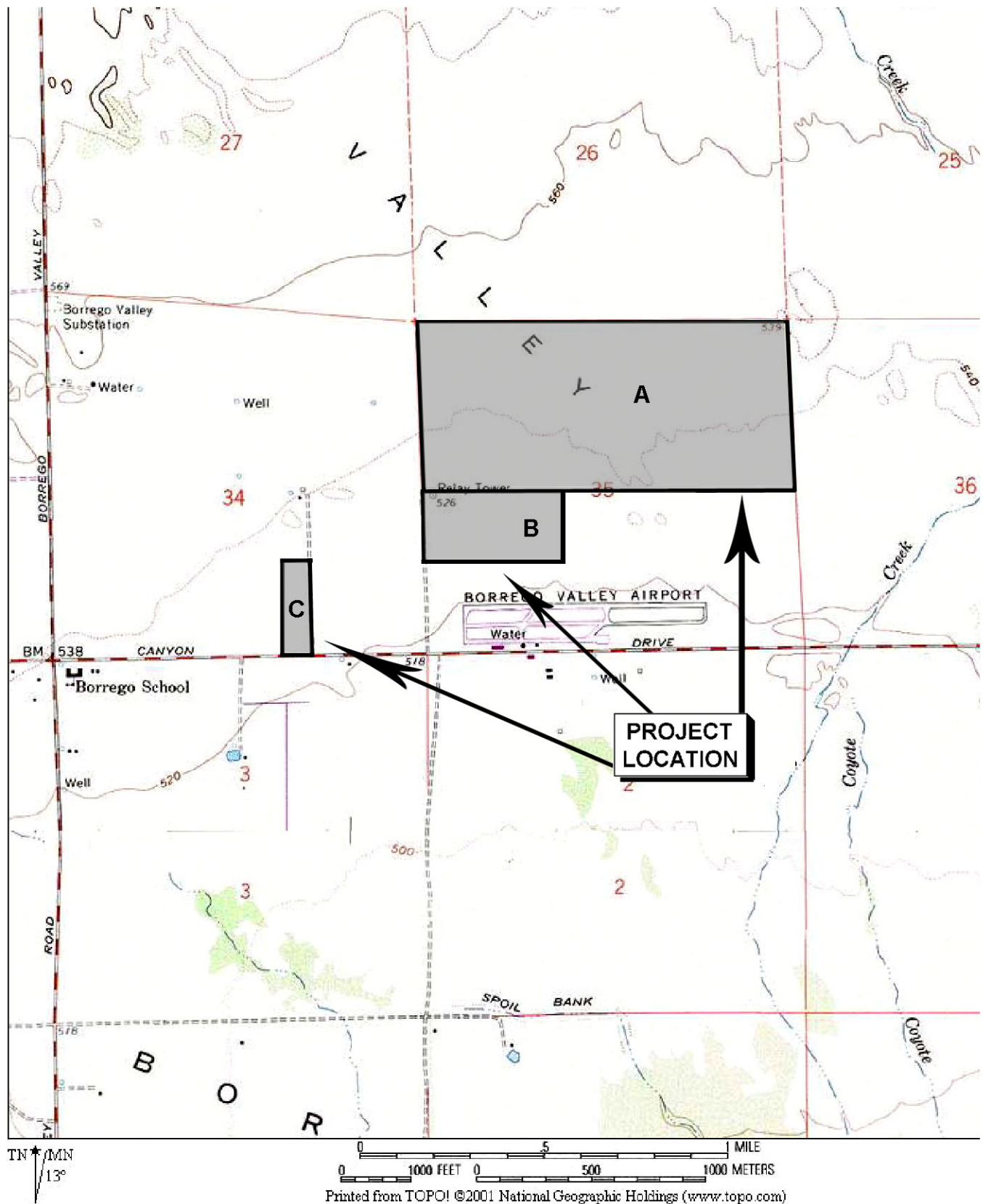
2009 Inside EPA's Water Policy Report. July 20, 2009. InsideEPA.com.



Affinis
Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

PROJECT AREA

FIGURE 1



Affinis

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

PROJECT LOCATION ON USGS 7.5' CLARK LAKE QUADRANGLE

FIGURE 2



Affinis

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

EPHEMERAL DRAINAGE

FIGURE 3

**Affinis**

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

EPHEMERAL DRAINAGE

FIGURE 4



Affinis

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

DISTURBED AREAS

FIGURE 5

**Affinis**

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

CRACKED SOIL

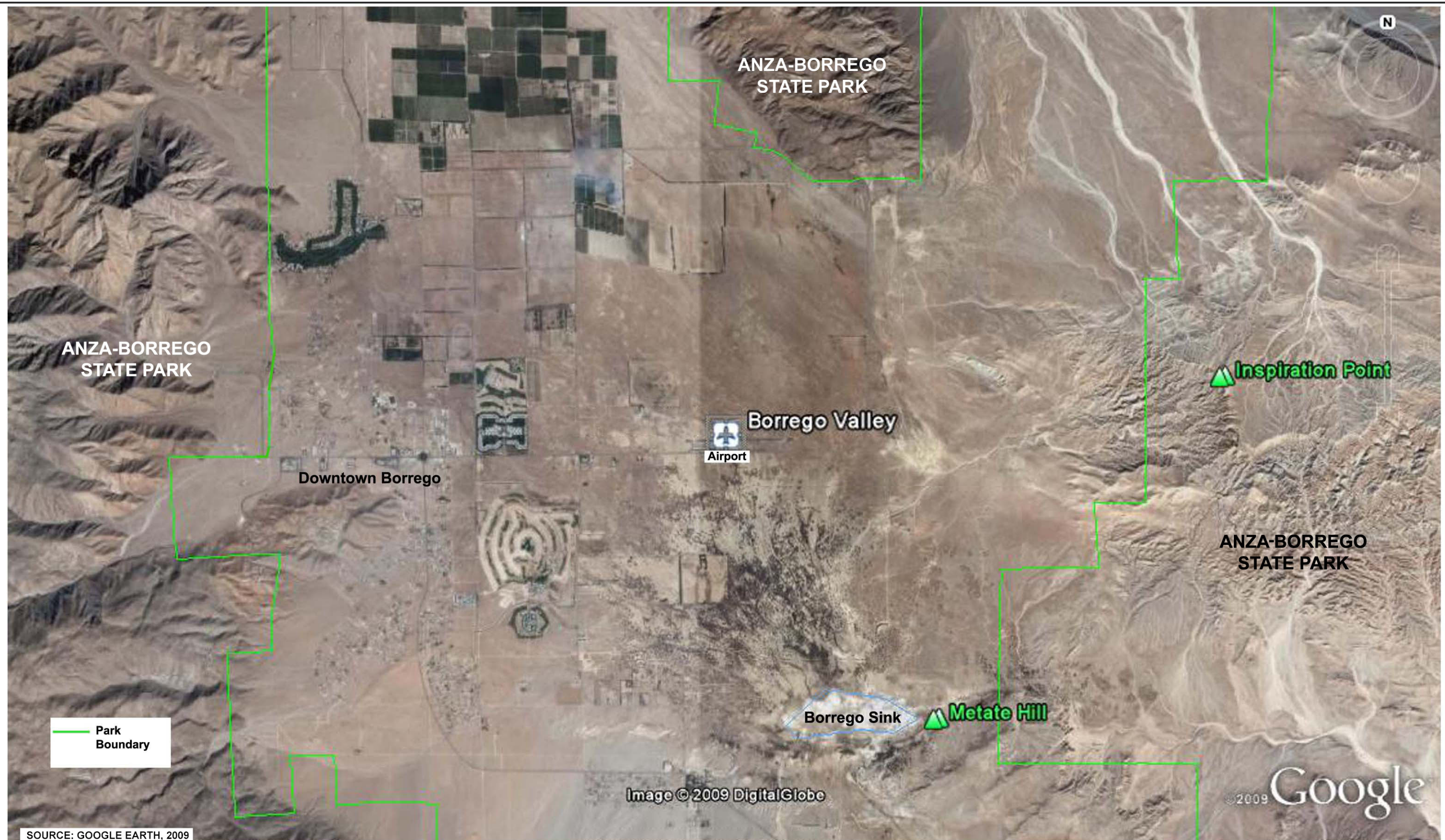
FIGURE 6

**Affinis**

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

SOIL PITS

FIGURE 7



Affinis

Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

AERIAL VIEW OF REGION

FIGURE 8

NE corner of Parcel A

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Borrego Solar City/County: Borrego Sampling Date: 7-3-09
 Applicant/Owner: EVRS State: _____ Sampling Point: A
 Investigator(s): M. Busdash Section, Township, Range: NE 1/4 Section 35, T10S, R6E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): slight Slope (%): 0
 Subregion (LRR): D Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Indro silt loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____				
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species <u>5</u> x 3 = <u>15</u>
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species <u>5</u> x 5 = <u>25</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>10</u> (A) <u>40</u> (B)
1. <u>Eucrypta</u>	<u>5</u>		(Upl)	Prevalence Index = B/A = <u>4.0</u>
2. <u>chrysanthemifolia</u>				
3. _____				
4. <u>Crassula canoto</u>	<u>5</u>		FAC	
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>90</u>	% Cover of Biotic Crust <u>0</u>			
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: <u>Both plants common on surrounding salt bush uplands.</u>				

SOIL

Sampling Point: _____

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

SW corner Parcel B

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Borrego Salor City/County: Borrego SD Sampling Date: 7-2-09
 Applicant/Owner: Eurus State: CA Sampling Point: B
 Investigator(s): M. Busdich Section, Township, Range: SW 1/4 Section 35, T10S, R6E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): slight Slope (%): 0
 Subregion (LRR): LRR D Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Indio silt loam, saline NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Cracked soil area</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			
Remarks: <u>No vegetation</u>				

Sampling Point:

B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
20	10YR 5/3		None					Soil cylinder crumbled on removal
								No features in crumbled soil or in pit wall

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
- ☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
- ☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
- ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
- ☐ Stratified Layers (A5) (**LRR C**) ☐ Depleted Matrix (F3)
- ☐ 1 cm Muck (A9) (**LRR D**) ☐ Redox Dark Surface (F6)
- ☐ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
- ☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
- ☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
- ☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
--------------------------------------------------------------------------------	------------------------------------------------------------------------------

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Parcel C

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Borrego Solar City/County: Borrego Sp Sampling Date: 6-10-09
 Applicant/Owner: Envus State: CA Sampling Point: C
 Investigator(s): M. Busdosh Section, Township, Range: SE 1/4, Section 34, T10S, R6E
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): slightly Slope (%): 0
 Subregion (LRR): LRR D Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Indio Silt Loam, saline NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ? No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Much of this 9 acre parcel appears to have ground disturbance</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
4. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species _____ x 1 = _____	
3. _____	_____	_____	_____	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
_____ = Total Cover				UPL species _____ x 5 = _____	
				Column Totals: _____ (A) _____ (B)	
				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	___ Dominance Test is >50%	
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹	
3. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>	

Remarks:

No vegetation

Sampling Point:

HYDROLOGY

Wetland Hydrology Indicators:US Army Corps of Engineers



July 6, 2009

JN: 25-103821.001

Marcia Adams
Affinis
847 Jamacha Road
El Cajon, CA 92019

Subject: Eurus Energy –Borrego Unmanned Photovoltaic Solar Farm

Dear Marcia,

This letter is in reference to the Eurus Energy solar farm project located in Borrego Springs, California. The project site is located on approximately 400 acres just north of the existing Borrego Valley Airport on Palm Canyon Drive (Assessor's Parcel Numbers: 141-230-26, 141-230-33, and 141-210-24). We have evaluated the hydrology and hydraulic characteristics of the project site and reviewed other readily available data published by the County of San Diego relating to surrounding surface water features within the region. Based upon our evaluation, we have determined that surface water from the site naturally drains to the Borrego Sink via Coyote Creek. An exhibit illustrating the regional drainage patterns is attached for reference. The Borrego Sink is located approximately 3 miles south of the project site and is known as an area where surface water infiltrates into the groundwater table. Based on our evaluation of the topography and drainage patterns of the project area, we have not identified any evidence that stormwater runoff could be conveyed by surface water features to the Salton Sea. The Salton Sea is located approximately 32 miles to the east of the Borrego Sink. Since grading activities for the Eurus Energy solar farm will be relatively minor and limited to within site limits, the proposed project will not alter drainage patterns causing surface water to drain to the Salton Sea.

Should you have any questions or concerns regarding the above, please feel free to contact me at 858.614.5000.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard Lucera", is written over a light blue horizontal line.

Richard Lucera, P.E., CFM, CPESC
Senior Project Manager

Enclosures:
Regional Drainage to Borrego Sink

H:\PDATA\25103821\Admin\correspndnc\3821ltr001.doc

PLANNING ■ DESIGN ■ CONSTRUCTION

9755 Clairemont Mesa Boulevard, San Diego, CA 92124-1324 ■ 858.614.5000 ■ Fax 858.614.5001

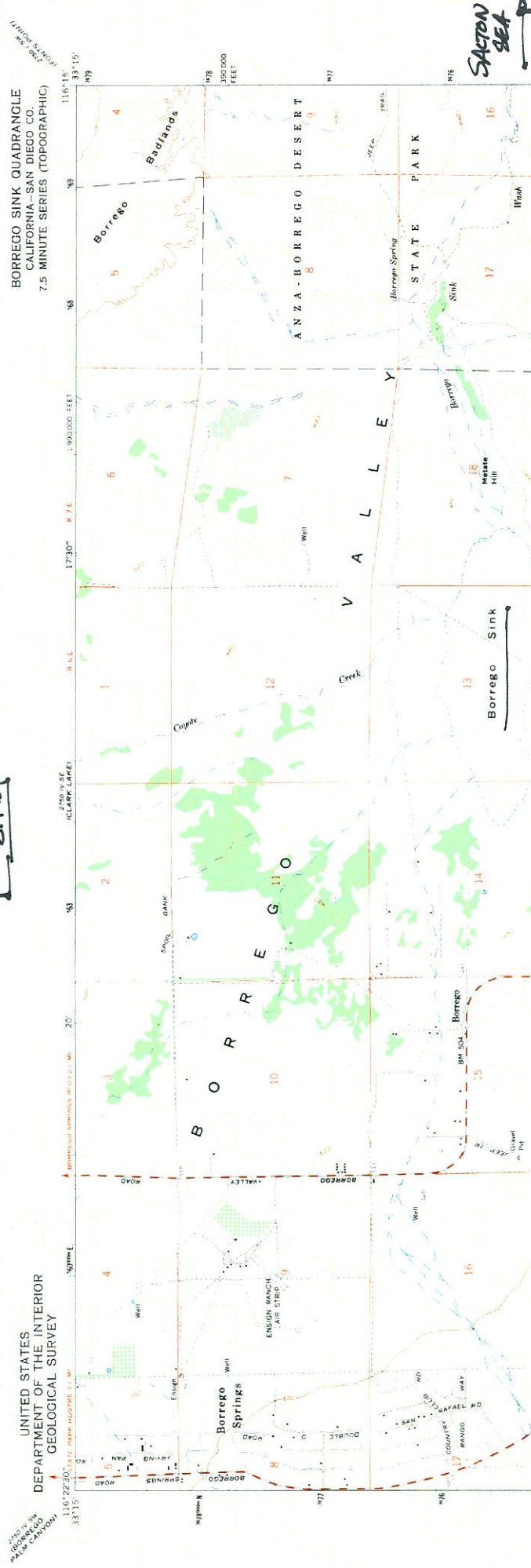
Offices located throughout California, Arizona & Nevada ■ www.RBF.com

printed on recycled paper

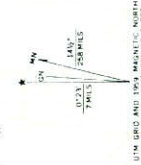
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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BORREGO SINK QUADRANGLE
CALIFORNIA—SAN DIEGO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Maped, edited, and published by the Geological Survey
Control by USGS, USCGS, and USCE
Topographic from aerial photographs by photogrammetric methods
Aerial photographs taken 1955. Field check 1959
Polyconic projection. 1927 North American datum
1:50,000 foot grid based on California coordinate system, zone 6
1:50,000 foot grid based on California coordinate system, zone 6
Zone 11, shown in blue
To place on the indicated North American Datum 1983
move the projection lines 2 meters south and
78 meters east as shown by dashed corner ticks
Dashed lines indicate approximate locations
Land lines omitted in parts of 1 12 S., 11 S. and 7 E.
because of insufficient data
The names of place names within the boundaries of
the National State boundaries shown on the map



SCALE 1:24,000
CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION
Medium duty
Light duty
Unimproved dirt
State Route



BORREGO SINK, CALIF.

FOR SALE BY U.S. GEOLOGICAL SURVEY, CENTER, COLORADO 80525, OR RESTON, VIRGINIA 22092
A 7.5-MINUTE TOPOGRAPHIC MAP AND PHOTOGRAPHIC AERIAL PHOTOGRAPHY

33116 B3 11-024
1959
DMA 2750 (11 NE SERIES VIMS)

APPENDIX 10

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 03/08/2010

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Cryptantha ganderi*

Common Name: Gander's cryptantha

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 4 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☒ no ☐ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Affinis

Address: 847 Jamacha Road
El Cajon, CA 92019

E-mail Address: lonestar@affinis.net

Phone: (619) 441-0144

Plant Information

Phenology: 100% vegetative 100% flowering 80% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Desert saltbush scrub. Flat terrain, sandy soils. Other common desert wildflower species occurring.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Borrego Airport to the S; SDG&E substation to the W. Land to the N, W and immediate E is vacant.

Visible disturbances: Vehicle tracks.

Threats: _____

Comments: Large number of weedy species in March - April of 2010 due to heavy winter rains.

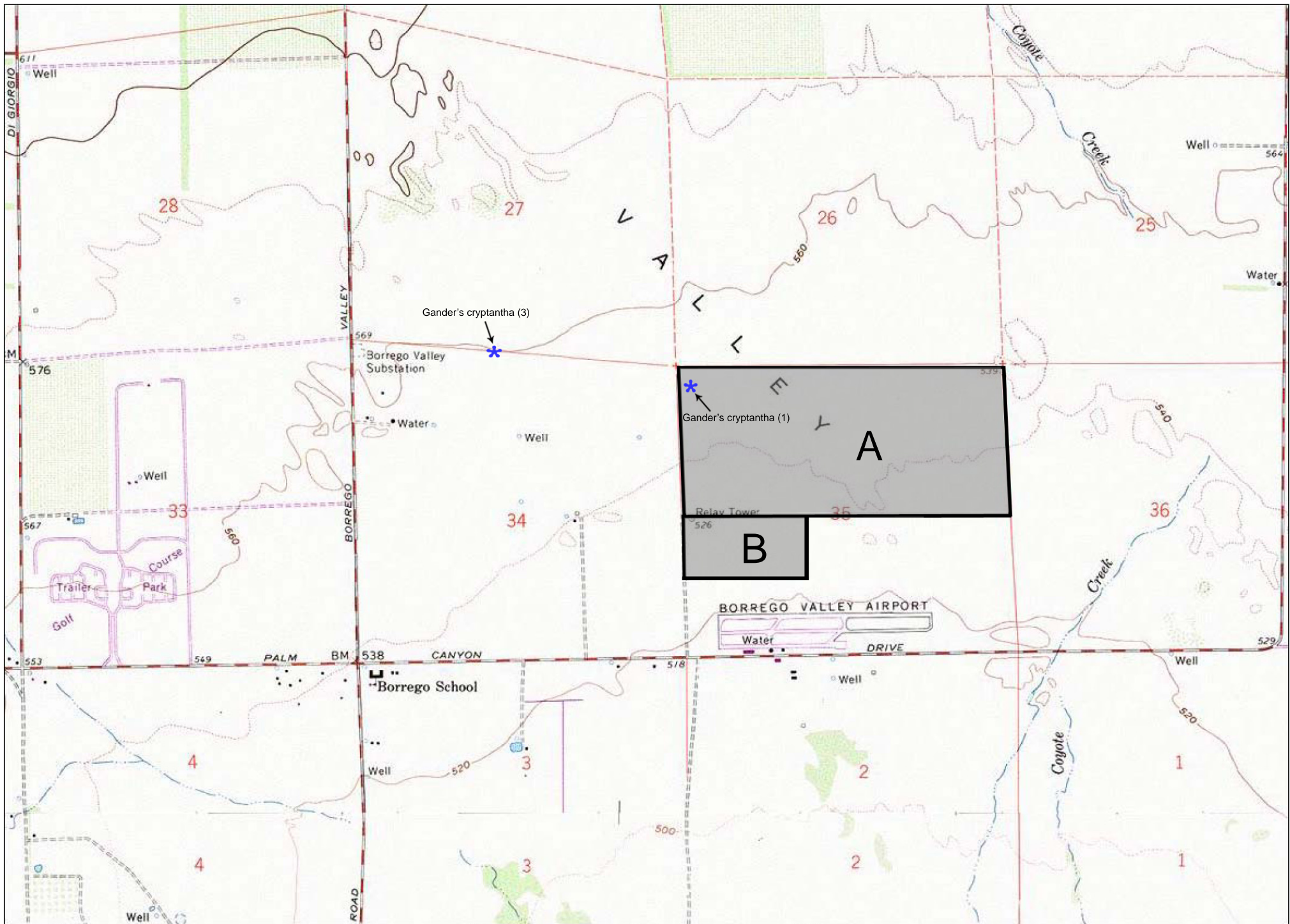
Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Desert Manual
☐ Compared with specimen housed at: _____
☒ Compared with photo / drawing in: Internet sources
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐



TN MN
13°

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 03/08/2010

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Cryptantha costata*

Common Name: Ribbed cryptantha

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 5 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☒ no ☐ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Affinis

Address: 847 Jamacha Road
El Cajon, CA 92019

E-mail Address: lonestar@affinis.net

Phone: (619) 441-0144

Plant Information

Phenology: 100% vegetative 100% flowering 80% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Desert saltbush scrub. Flat terrain, sandy soils. Other common desert wildflower species occurring.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Borrego Airport to the S; SDG&E substation to the W. Land to the N, W and immediate E is vacant.

Visible disturbances: Vehicle tracks.

Threats: _____

Comments: Large number of weedy species in March - April of 2010 due to heavy winter rains.

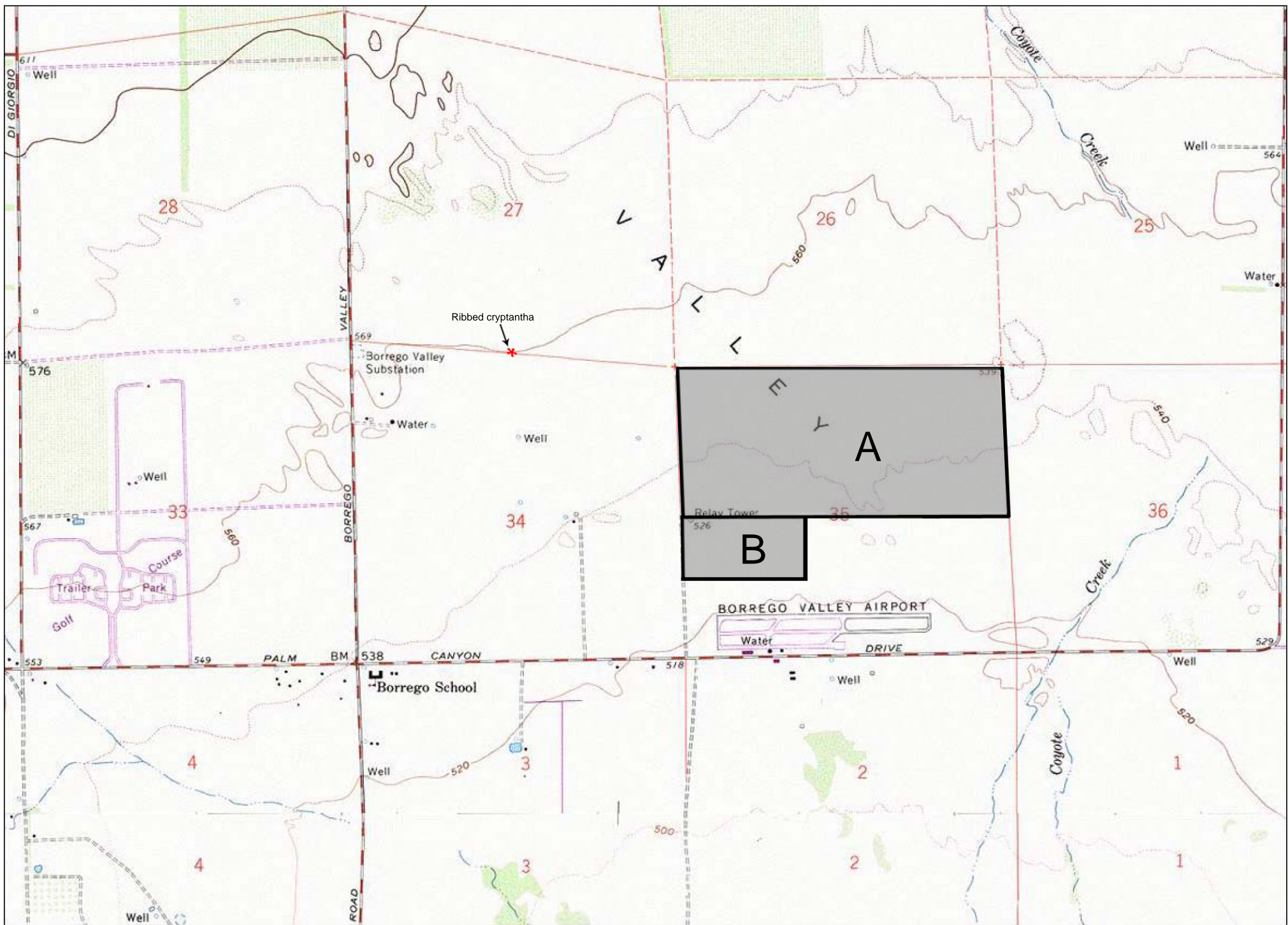
Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Desert Manual
☐ Compared with specimen housed at: _____
☒ Compared with photo / drawing in: Internet sources
☐ By another person (name): _____
☐ Other: _____

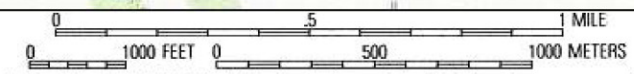
Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes ☐ no ☐



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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 08/21/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Uma notata notata*

Common Name: Colorado desert fringe-toad Lizard

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☒ no ☐ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Affinis

Address: 847 Jamacha Road
El Cajon, CA 92019

E-mail Address: lonestar@affinis.net

Phone: (619) 441-0144

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

1
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Basking in sandy opening in desert saltbush scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments: Horned lizard (Species unknown) scat also found in vicinity.

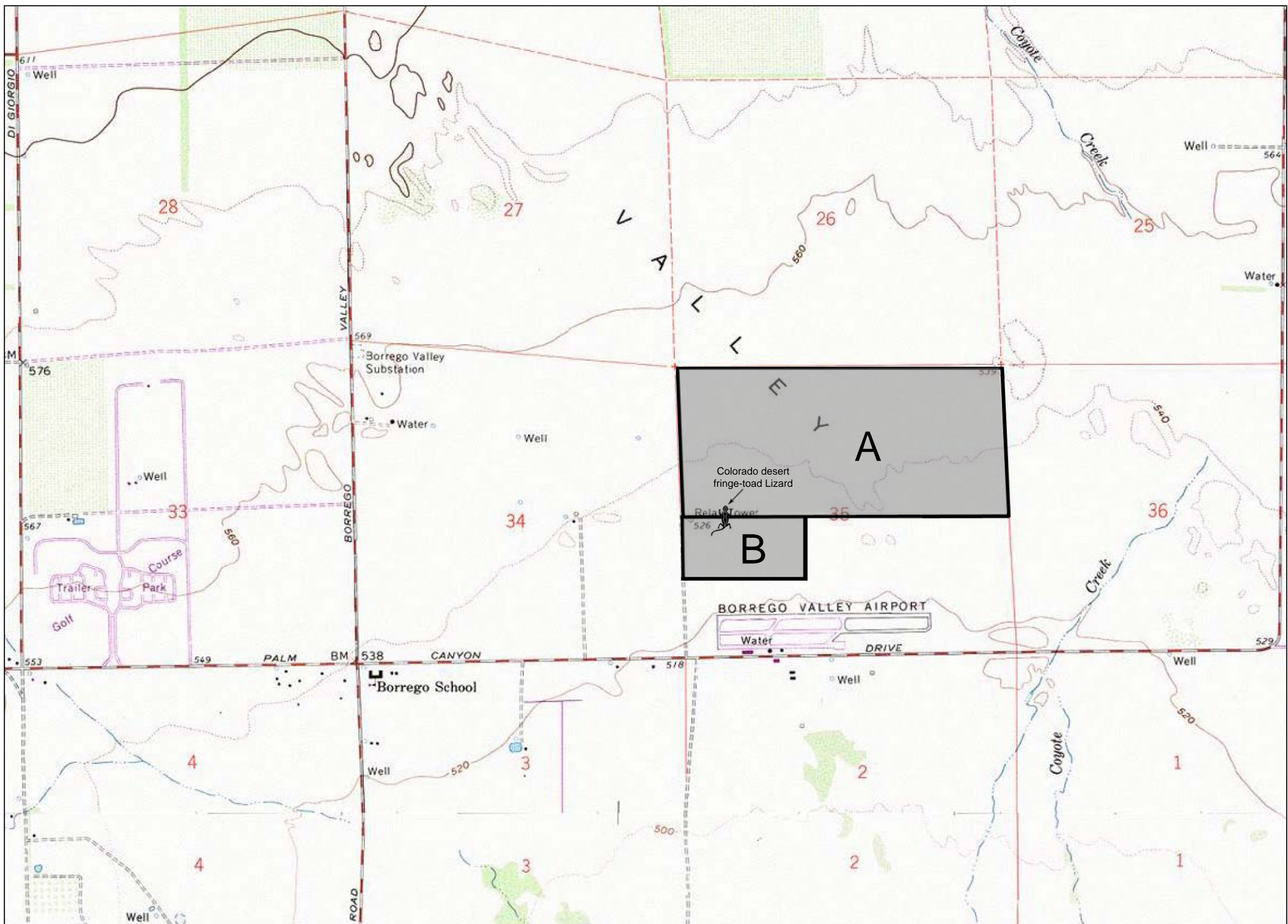
Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more) Slide Print Digital

Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐



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Source Code _____ Quad Code _____
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EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 03/25/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Lanius ludovicianus*

Common Name: Loggerhead shrike

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☒ no ☐ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Affinis

Address: 847 Jamacha Road
El Cajon, CA 92019

E-mail Address: lonestar@affinis.net

Phone: (619) 441-0144

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

1
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Perched in dead mesquite tree. Overall habitat is desert saltbush scrub. Observed in general area on both 03/25/2009 and 03/26/2009.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Borrego Airport to the S; SDG&E substation to the W. Land to the N, W and immediate E is vacant.

Visible disturbances:

Threats:

Comments: May potentially nest in area although many mesquite trees dead or dying due to lack of groundwater.

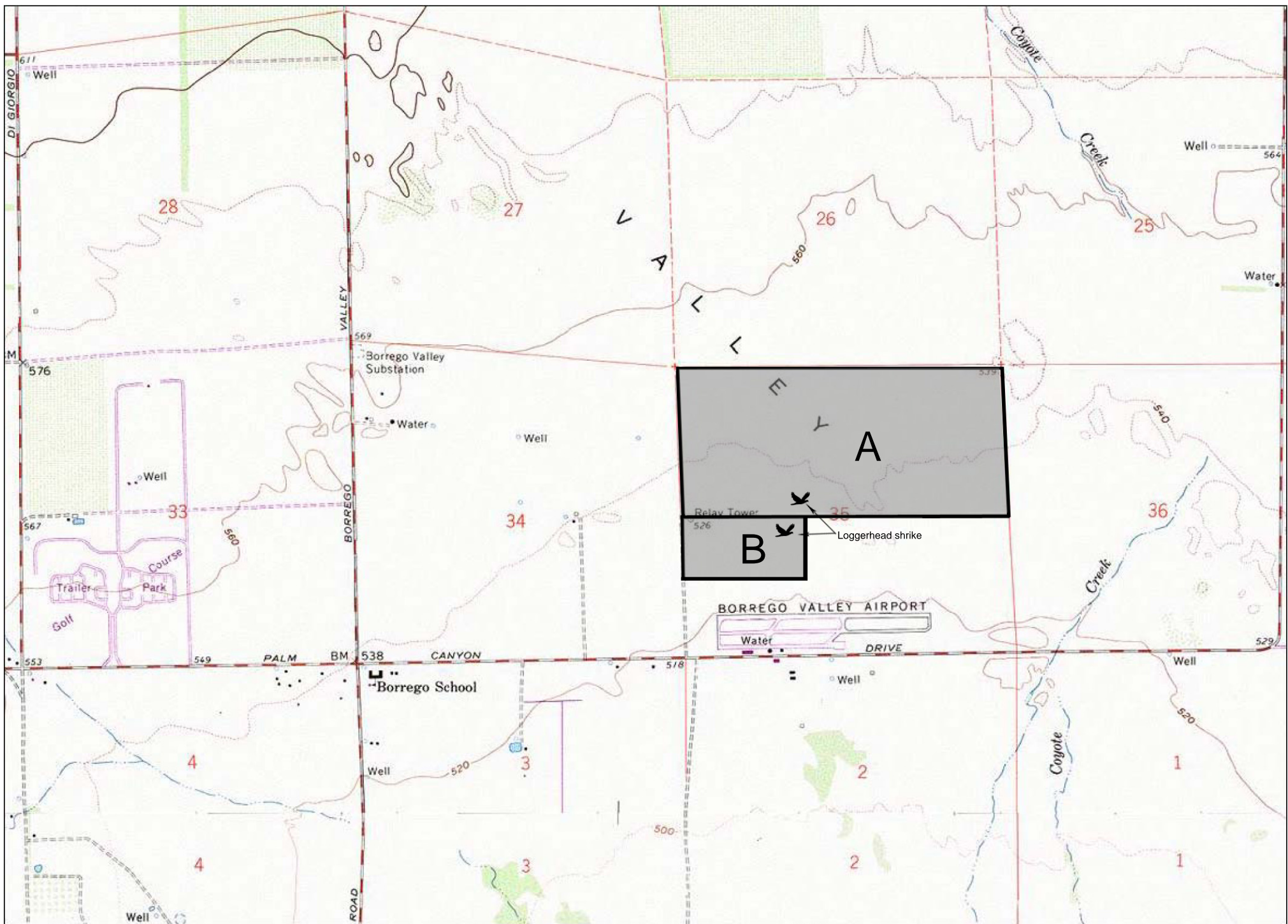
Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐



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